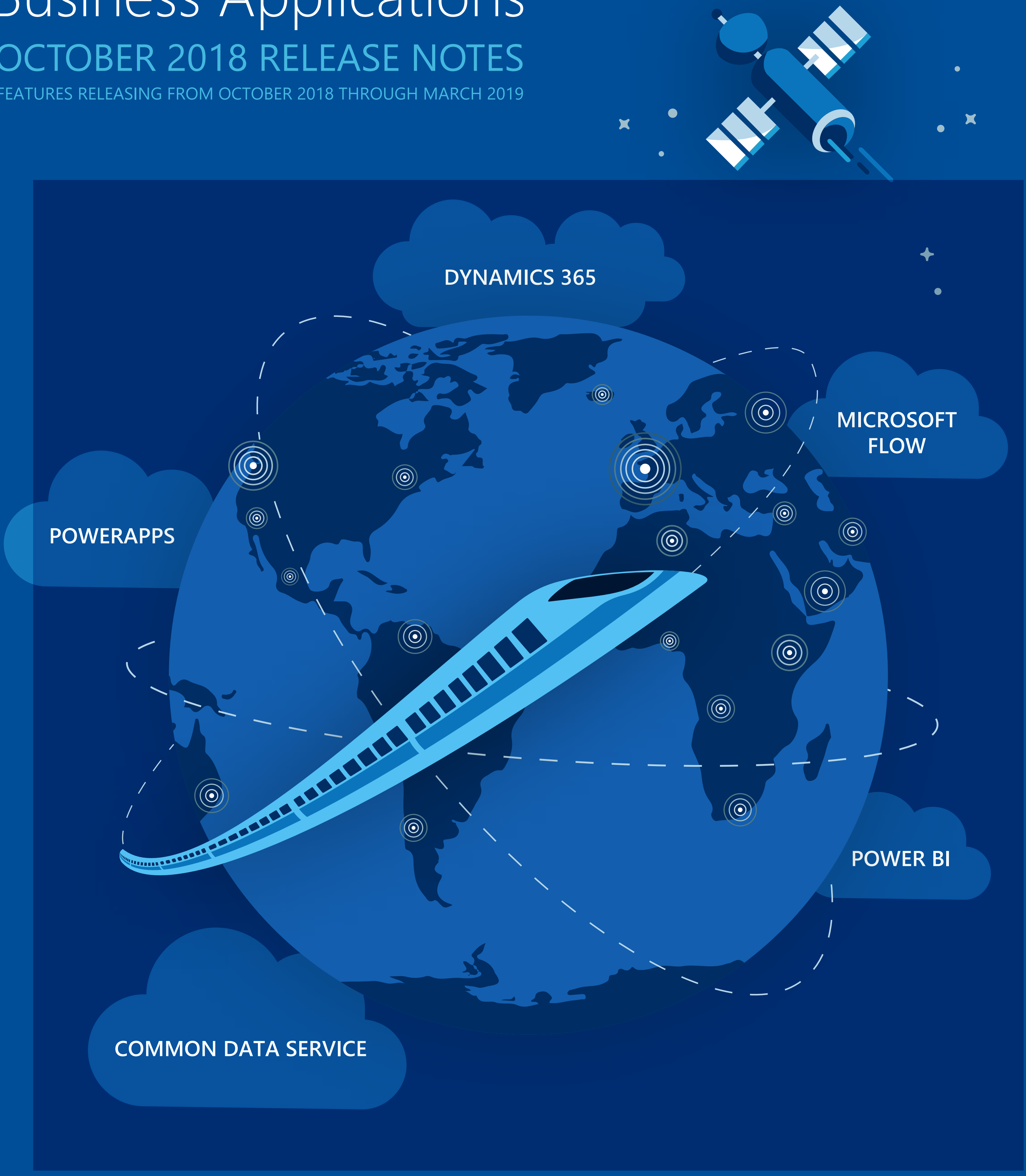
Microsoft

Business Applications

OCTOBER 2018 RELEASE NOTES

FEATURES RELEASING FROM OCTOBER 2018 THROUGH MARCH 2019



Contents

October '18 release overview

The Business Applications October '18 release brings significant capabilities to enable you to transform your business. These new services and capabilities become available starting in October 2018.

- **Enhancements to Dynamics 365 applications** include hundreds of new capabilities across Sales, Marketing, Customer Service, Portals, Omni-channel Engagement Hub, Field Service, Project Service, Social Engagement, Finance and Operations, Talent, Retail, and Business Central. We're introducing a new set of mixed reality experiences using Microsoft Layout and Microsoft Remote Assist.
- **New intelligence applications** employ decades of AI work pioneered by Microsoft Research to make Dynamics 365 more intelligent. You can enhance sales performance and planning with the new Dynamics 365 AI for Sales application.
- **New Power platform capabilities** combine Power BI, PowerApps, Microsoft Flow, the Common Data Service for Apps, and Power BI dataflows into an unmatched palette of tools to extend, customize, and integrate Dynamics 365 and Office 365 into your environment. These experiences are powered by insights and intelligence from data across hundreds of business systems with built-in connectivity to the platform, tightly integrating into the business applications people use daily.
- **Deeper integrations with other Microsoft products** offer seamless experiences with Dynamics 365 and Microsoft Outlook, Teams, SharePoint, Stream, Azure, and LinkedIn. We've enhanced Dynamics 365 with data and signal from Office 365 and Bing.
- **Performance, usability, and supportability enhancements** improve the applications and underlying platform, and provide a better experience for you to run your businesses.

We've done this work to help you—our partners, customers, and users—drive the digital transformation of your business on your terms.

We're looking forward to engaging with you as you put these new services and capabilities to work, and we're eager to hear your feedback as you dig into the October '18 release.

Let us know your thoughts. Send email to releasenotes@microsoft.com. We'll use your feedback to improve our content.

Marketing

Overview of Dynamics 365 for Marketing October '18 release

Dynamics 365 for Marketing delivers comprehensive capabilities for creating and running multi-channel campaigns to generate leads for your sales team using simple drag-and-drop design tools.

In the October '18 release, new capabilities include account-based marketing and deeper LinkedIn integration. The marketing app also supports additional languages and is available in more markets.

These key areas of investment are designed to help you optimize your marketing efforts:

- **Intelligence integrated into the app** means marketers can build custom dashboards using Power BI to leverage data from various apps, marketing interactions, and other data sources. Combine these analytics with social listening, which monitors brand awareness and sentiment on social networks, to get the full picture and evaluate the success of your campaigns—all right on the visual customer journey canvas.
- **Personalized marketing experiences** are fine-tuned for both users and prospects. Account-based marketing helps close more deals by targeting specific accounts that are most likely to generate revenue. Content management is supported at block level with role-based editing privileges. The new marketing calendar provides a quick overview of all scheduled journeys and events to help marketers plan better.
- **More integrations with Microsoft offerings** include video marketing with Microsoft Stream, and deeper LinkedIn integration extends into marketing automation.
- **Fundamental improvements** provide improved performance, and greater scalability and throughput of email marketing services. The segmentation user interface has been enhanced to improve usability and performance for the most common scenarios.

Availability

All features in this release will be available on the commercial cloud in all markets supported by the Dynamics 365 for Marketing app. For status, please refer to the summary of what's new in Dynamics 365 for Marketing.

Tell us what you think

CRMMarketingPM@microsoft.com

Summary of what's new in Dynamics 365 for Marketing

Feature	Release type	Target release month
Account-based marketing	General Availability	October 2018
Reusable content blocks	General Availability	October 2018
Social listening for your campaigns	General Availability	October 2018
Marketing calendar for planning	General Availability	October 2018
Deep LinkedIn integration	General Availability	October 2018
Richer segmentation experience	General Availability	October 2018
Custom analytics	General Availability	October 2018
Additional languages and geographies	General Availability	October 2018
Video content using Microsoft Stream	Public Preview	October 2018

Account-based marketing

With account-based marketing, business-to-business (B2B) marketers can use Dynamics 365 for Marketing to target each business account as a single unit, thus increasing integration and alignment between the sales and marketing departments.

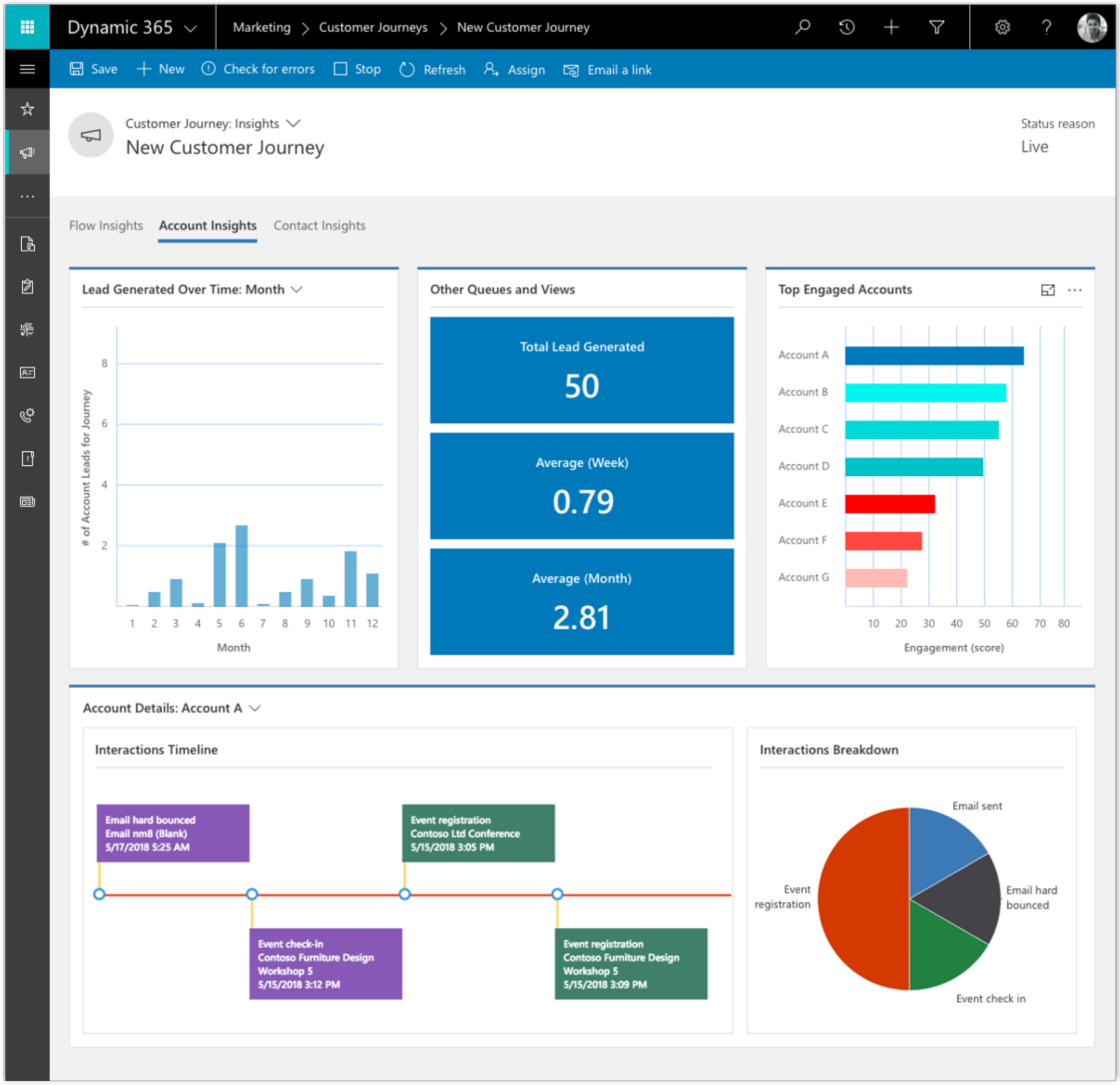
Account-based marketing scenarios enable sales and marketing to close more deals by targeting specific accounts—those that are most likely to generate the largest revenue.

Account-based marketing tailors demand generation and messaging for a specific set of accounts to ensure relevance and value for them, and for your salespeople. Account-based marketing can help organizations to:

- Align sales and marketing departments by mapping marketing activity to account strategies.
- Increase return on investment by removing waste and focusing on targeted, high-value accounts.
- Increase account relevance by providing personalized and compelling content.
- Generate efficiency by identifying specific contacts at specific companies within a specific market.

Account-based marketing can:

- Identify and create segments of high-value accounts.
- Identify key stakeholders to reach within each account.
- Create personalized content, such as emails, based on account.
- Generate account-level leads and nurture them through the demand-generation funnel.
- Continuously measure account engagement and optimize your messaging.



See account insights on journeys

Reusable content blocks

Reusable content blocks enable Marketing users to define and store reusable blocks of content that are easy to add to email and page designs. For example, if you've created a beautiful header for a marketing page, you can make it a standard design element by saving it as a reusable block. You can also protect some or all of a block's content or design to restrict other users' ability to edit them.

Reusable content blocks provide a protected way to distribute standard marketing materials and design elements among your team for use in campaigns, pages, and emails. Because you can selectively protect some aspects of the content, you can improve compliance with your brand identity and organizational design standards.

Use the new content-blocks creator to define the content, design, and rules for each reusable content block. You can even include dynamic values from Dynamics 365. Once a block is saved and the rules are set, users will be able to see it in read-only mode within the content designer for marketing pages and emails. Users can then drag and drop these tiles into their designs and use the block. Each block could be as simple as a call-to-action button, or as complex as an event countdown timer.

Social listening for your campaigns

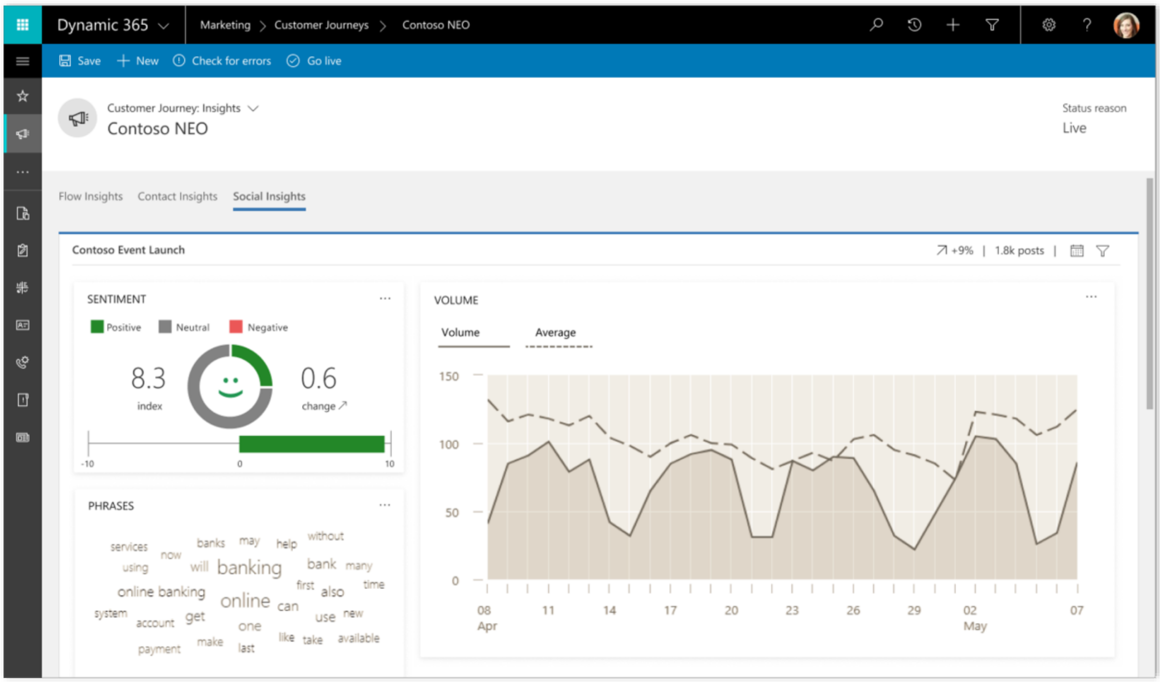
Modern marketing relies on signals from social media to help keep customers engaged. Social listening in Dynamics 365 for Marketing lets marketers add relevant social tags to customer journeys, events, and other entities, so they can view the social media response to their marketing initiatives right alongside other marketing insights.

A modern marketer must be able to combine analytics generated through social media platforms with those from traditional digital marketing, like email and landing pages, to obtain a comprehensive overview of their market impact. Dynamics 365 for Marketing brings together insights from multiple marketing channels like events, emails, and landing pages, as well as social listening data from various social media platforms.

Social listening adds:

- A dedicated social tab to every customer journey and event.
- A new dashboard for social insights.

Marketers use the social tab to establish a collection of specific phrases that are relevant to the related customer journey or event, and then monitor social media posts for mentions of those phrases. Social listening gathers data from all the major social networks and populates the various widgets on the social tab with relevant analytics that reveal how often each phrase is mentioned over time, the sentiment associated with each mention, potential influencers that mention the phrases, and much more.



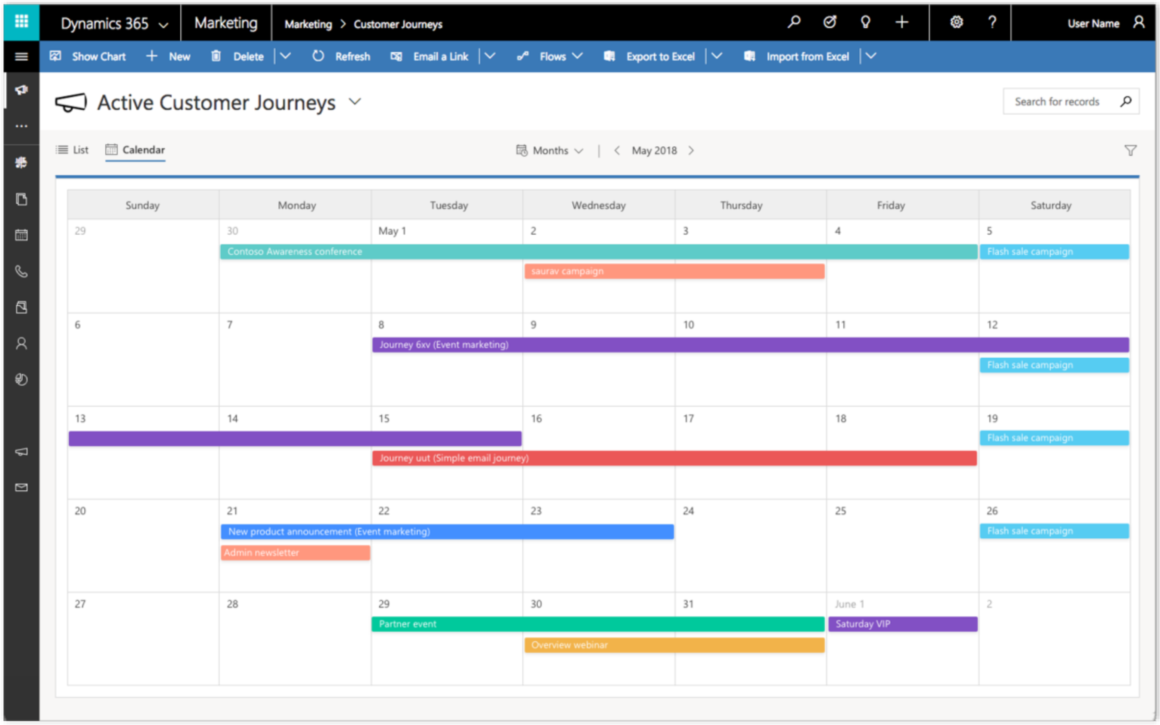
Social listening

Marketing calendar for planning

The marketing calendar control lets marketers visualize a variety of marketing activities that have a start and end date. Effectively, marketers can view many elements of a campaign (such as events) on the same calendar, providing an easy overview.

The calendar enables all stakeholders to view many diverse elements of a marketing campaign on a single calendar, allowing for faster decision making. It's easy for events planners to view or create sessions straight from the calendar, while accounting for room and speaker availability, without leaving the page.

The marketing calendar provides a mobile-friendly responsive control that allows users to view and in some cases create items on the calendar without leaving the page. Most marketing entities that include a start and end date such as journeys and events can be shown. The calendar makes it easy to add entities with a click, or view sessions inside an event.



Marketing calendar

Deep LinkedIn Integration

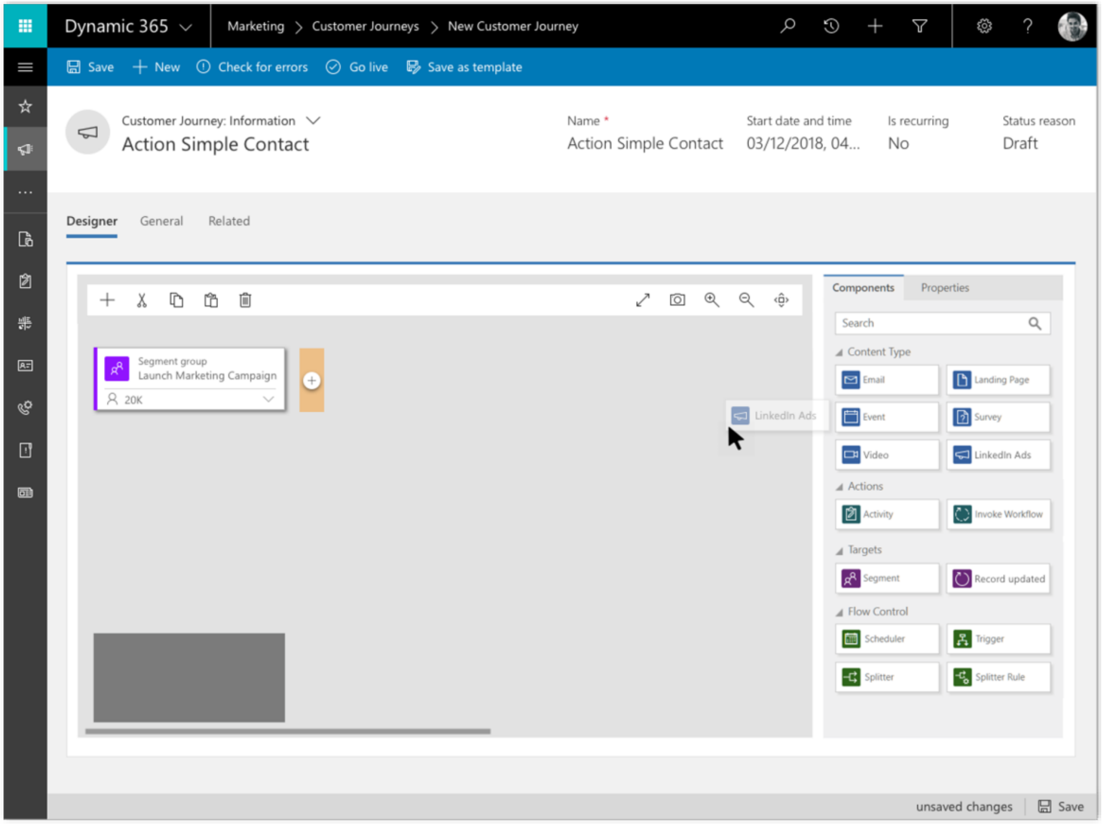
Dynamics 365 for Marketing provides deep LinkedIn integration for generating leads from professional networks and relationships. New integration features let you run journeys specifying targeting on LinkedIn and leverage resulting interactions for orchestration, scoring and segmentation.

Deep LinkedIn integration brings:

- Optimized and high-quality engagement on LinkedIn through account-based marketing.
- Generation of more highly qualified leads to be nurtured from within Dynamics 365 for Marketing and an increase in the marketing return on investment.

Dynamics 365 for Marketing can already sync leads captured using LinkedIn Lead Gen Forms. We are expanding on this capability by adding the following functionality:

- Integrate Dynamics 365 for Marketing segments with LinkedIn-matched audiences.
- Orchestrate journeys that includes triggers that react to submission from LinkedIn Lead Gen Forms.
- Evaluate the success of your LinkedIn targeting via engagement statistics in Dynamics 365 for Marketing.
- Generate leads in Dynamics 365 for Marketing on the account level when retrieving form submissions from LinkedIn.
- Nurture leads via lead scoring based on LinkedIn form submission interactions.



Targeted LinkedIn ads through journeys

Richer segmentation experience

The improved segment designer enables marketers and business analysts to create segments more easily and efficiently. A host of new business-centric operators will make it simpler for business users to create complex, business-centric marketing segments, allowing them to easily create segments for targeted marketing.

The improved segment designer provides:

- More operators.
- Improved user interface performance.

Custom analytics

Dynamics 365 for Marketing collects wide-ranging and detailed information about how contacts interact with your marketing initiatives. Use custom analytics to organize and present this data within the Marketing app.

Custom analytics can help deliver actionable insights based on data from Marketing and other business applications. View reports that are fine-tuned to your business processes and use them to identify ways to run more efficient and effective campaigns. In the future, we'll also deliver insights based on machine learning to help you get even more out of your business data, acquired data, and unique Microsoft data sets.

Use Dynamics 365 for Marketing to build custom analytics that support your organization's specific business processes, drive good decision making, and deliver results. Design charts, graphs, and KPIs that you can embed right into the app, where marketers need them most. The solution includes a useful collection of analyzers provided right out of the box to help you quickly start building deeper analytics.

New geographical and language support

For the October 2018 release, we will greatly expand the set of languages and geographies where Dynamics 365 for Marketing is available and supported.

Language availability

Dynamics 365 for Marketing is currently available in 8 languages. We'll be adding 33 more.

Currently supported	Coming in October '18
Danish, Dutch, English, French, German, Italian, Japanese, Spanish	Arabic, Basque, Bulgarian, Catalan, Chinese (Hong Kong), Chinese (Taiwan), Croatian, Czech, Estonian, Finnish, Galician, Greek, Hebrew, Hungarian, Indonesian, Korean, Latvian, Lithuanian, Norwegian (Bokmal), Polish, Portuguese (Brazil), Portuguese (Portugal), Romanian, Russian, Serbian (Latin), Serbian Cyrillic, Slovak, Slovenian, Swedish, Thai, Turkish, Ukrainian, Vietnamese

** Right-to-left (RTL) languages aren't supported on marketing pages or event portals.*

Geographical availability

The geographical availability of Dynamics 365 for Marketing will be expanded to include all of the markets where Dynamics 365 for Sales is already supported.

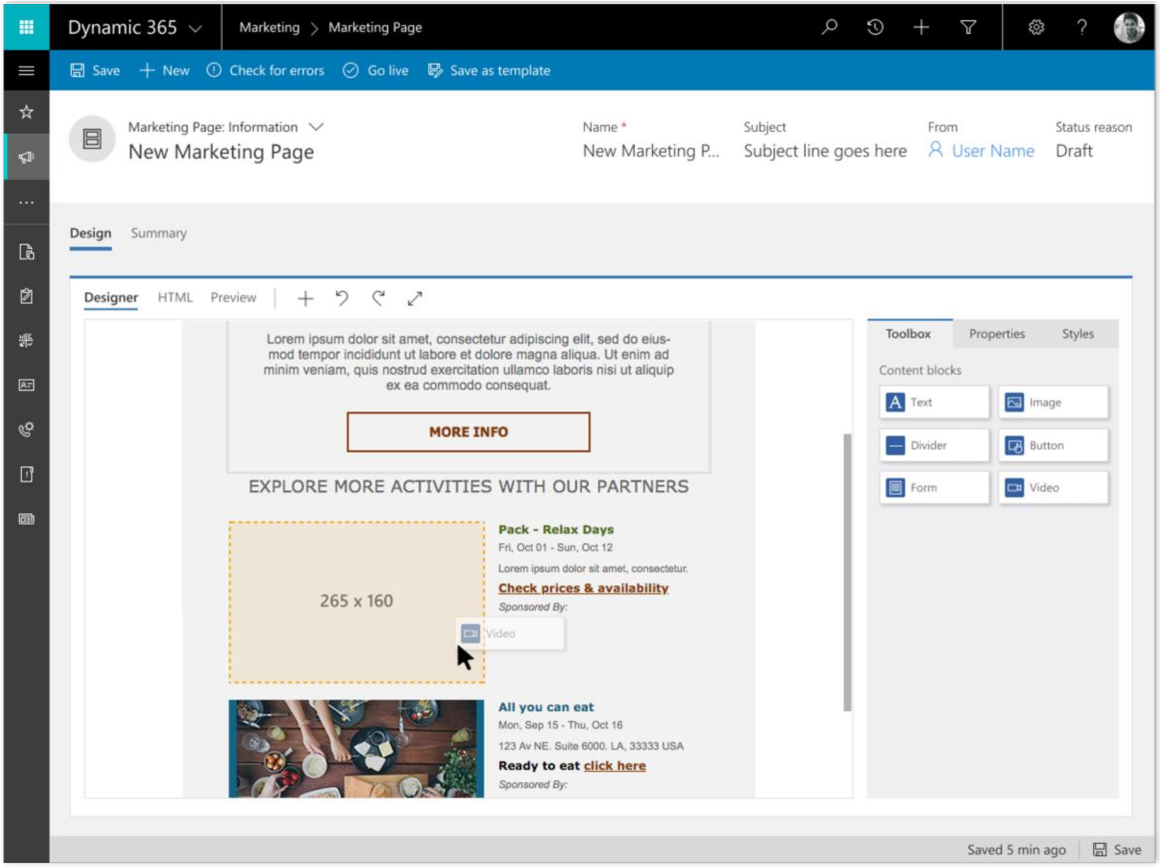
Area	Currently supported	Coming in October '18
The Americas	Canada, United States	Argentina, Bahamas, Barbados, Belize, Bermuda, Bolivia, Brazil, Cayman Islands, Chile, Colombia, Costa Rica, Curacao, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, St. Kitts and Nevis, Trinidad and Tobago, Uruguay, Venezuela, Virgin Islands U.S.
Europe, Middle East, and Africa	Denmark, France, Germany, Italy, Netherlands, Spain, United Kingdom	Afghanistan, Albania, Algeria, Angola, Armenia, Azerbaijan, Austria, Bahrain, Belarus, Belgium, Bosnia and Herzegovina, Botswana, Bulgaria, Cameroon, Cabo Verde, Cyprus, Côte d'Ivoire, Croatia, Czech Republic, Egypt, Estonia, Ethiopia, Faroe Islands, Finland, Georgia, Ghana, Greece, Hungary, Iceland, Iraq, Ireland, Israel, Jordan, Kazakhstan, Kenya, Kyrgyzstan, Kuwait, Latvia, Lebanon, Libya, Liechtenstein, Lithuania, Luxembourg, Macedonia (FYRO), Malta, Mauritius, Moldova, Monaco, Mongolia, Montenegro, Morocco, Namibia, Nigeria, Norway, Oman, Palestinian Authority, Pakistan, Poland, Portugal, Qatar, Romania, Russia, Rwanda, Saudi Arabia, Senegal, Serbia, Slovakia, Slovenia, South Africa, Sweden, Switzerland, Tajikistan, Tanzania, Tunisia, Turkey, Turkmenistan, Uganda, Ukraine, United Arab Emirates, Uzbekistan, Zambia, Zimbabwe
Asia Pacific	Australia, Japan	Bangladesh, Brunei, Fiji, Hong Kong SAR, India, Indonesia, Korea, Macau SAR, Malaysia, Nepal, New Zealand, Philippines, Singapore, Sri Lanka, Taiwan, Thailand, Vietnam

Video content using Microsoft Stream

Growing audience preference for audio/visual over written content has pushed marketers to start integrating video into their campaign and outreach strategies. Dynamics 365 for Marketing paves the way for video content to be added to marketing pages and emails.

Online videos are an essential part of marketing, and the fastest-growing medium for reaching newer and wider audiences. Dynamics 365 for Marketing provides native support for embedding videos in marketing communications.

The new videos feature in Dynamics 365 for Marketing adds a video block to the content designer. To add a video to any marketing page, just drag a video block from the designer's toolbox, drop it into place on your design, and choose which video to include.



Just drag a video block to embed a video in your content

Sales

Overview of Dynamics 365 for Sales October '18 release

Microsoft Dynamics 365 for Sales enables digital transformation by delivering productivity at scale and AI-driven analytics, and by modernizing the sales team collaboration through better-together integration across the Microsoft ecosystem.

The broad expansion to the sales suite allows organizations to modernize and extend their sales processes and applications with meaningful data at the core.

Microsoft Dynamics 365 for Sales strives to be the most significant sales insights and productivity application suite on the solution stack of any type and size of sales organization. By combining crucial business data about sellers, buyers, products, organizations, and relationships that previously lived on disconnected data silos in CRM systems, social graphs, and email systems, Microsoft Dynamics 365 for Sales helps organizations empower information workers to make intelligent decisions and be more productive.

Summary of what's new in Sales

This section lists the features planned for release between October 2018 and March 2019 in the Dynamics 365 for Sales and Dynamics 365 AI for Sales apps.

Feature	Release type	Target release month
Dynamics 365 for Sales		
Playbooks	General Availability	October 2018
LinkedIn insights	General Availability	October 2018
Microsoft Teams integration	Public Preview	October 2018
Who knows whom	Public Preview	October 2018
Talking points	Public Preview	October 2018
Quick Actions	Public Preview	October 2018
Predictive Lead Scoring	Public Preview	October 2018
Relationship analytics with LinkedIn InMail	Public Preview	October 2018
Dynamics 365 AI for Sales		

Feature	Release type	Target release month
Dynamics 365 AI for Sales app	Public Preview	October 2018
Microsoft call intelligence	Public Preview	October 2018

Empower sellers with Playbooks guided by event-driven sales activities

Dynamics 365 for Sales is introducing **Playbooks**, a new capability to help organizations automate repeatable sales activities and respond to external events.

In the age of the customer, buyers have the upper hand in the relationship with sellers. With nearly limitless access to information, they can dictate their own customer journeys, rather than follow a predefined business process. It is thus important to move from a reactive process-driven data repository on systems of record to proactive and predictive event-driven guidance engines that can suggest next best actions and surface relevant sales activities to successfully respond to external events.

One possible real-world application of Playbooks is the following scenario: If a decision maker and top champion of the product leaves the organization in the middle of a deal, this can become an event with the potential to jeopardize the entire commercial transaction. With Playbooks, however, automation can trigger a play that creates a set of tasks and activities needed to remedy the situation. A task to reach out to current contacts at the customer account and identify the new stakeholder could be immediately followed by an introductory phone call to better understand the new stakeholder's priorities. This carefully crafted orchestration of activities ensures that the new decision maker is successfully identified and turned into a new champion for the product so that the deal can be salvaged.

The new capabilities will allow organizations to:

- Configure Playbooks and define the set of tasks and activities to automate once triggered.
- Search and launch Playbooks for a particular scenario.
- Track the status progress of running Playbooks against their outcome, successful or not.

Build intelligent sales applications and business processes powered by LinkedIn insights

Dynamics 365 applications powered by LinkedIn insights are taken to the next level by combining the modular and customizable **LinkedIn Sales Navigator controls** with the power and flexibility of **Dynamics 365 Business Process Flows**. Any business process, including the sales scenarios, can be created or enhanced to feature LinkedIn insights about people and companies, which help information workers complete the stages and steps accurately and quickly, driving the sales deals and other processes forward toward a successful conclusion. The insights include:

- Fundamental data about companies including size, industry, and location.

- Fundamental data about people including name, company, position, and years of experience.
- Icebreakers and conversation starters, which are the key common aspects to start the conversation with a warm engagement.
- A path to a warm introduction with connection lists that include first, second, and LinkedIn TeamLink connections that reach beyond the information worker's network by traversing their entire organization and the aggregate networks.
- Recommendations for people similar to a target lead or who play a key role in an organization.

Transform sales team collaboration through tight integration with Microsoft Teams

Today's salespeople are on twice as many teams compared to five years ago. They work with an average of six decision makers and 16 colleagues to close a deal. The modern sales environment requires faster collaboration with more people and more data. The Microsoft Teams integration with Dynamics 365 brings together the capabilities that salespeople need to collaborate more effectively

Sales professionals can connect a Microsoft Teams channel to any Dynamics 365 record. With the connected Microsoft Teams channel, sales teams can communicate more effectively through persistent chat sessions across the Microsoft Teams and Dynamics 365 records, ensuring no one misses the latest conversations.

Users can share and coauthor sales collateral with their entire team seamlessly from either Microsoft Teams or Dynamics 365. Files get stored in one central location, ensuring the entire team has easy, consistent, and secure access to the latest documents.

Get introduced to prospects with the Who knows whom connection graph

The goal of the sales professional is to win more deals to meet or exceed their quota. With Who knows whom, sales people can easily identify colleagues within their organization who can introduce them to leads or contacts. Warm introductions increase response rate and interest by hundreds of percent. These warm introductions increase sales performance to improve lead-to-opportunity conversion rates, extending later to closing the deal. Who knows whom empowers sellers to increase sales conversion by leveraging their company network to get introduced to prospects and convert a cold call into a warm engagement.

Never forget that detail about your stakeholder with talking points

Salespeople interact with many people over a period of time. Remembering every detail about every person they interact with isn't always possible. Talking points helps busy salespeople by looking at their past communications to extract key details about the customer or contact on topics such as sports, health, family, and entertainment. These topics help salespeople in starting a conversation or building rapport with customers with whom they have not spoken recently or never met face to face.

Be more productive with Quick Actions

Get intelligence insights within your app while you're taking notes for your customers. Quick Actions analyzes your interactions with your customers and suggests actions you can take. The suggestions could be anything from creating a task to follow up with the customer or creating an appointment to meet with them.

Increase sales conversions with Predictive Lead Scoring

Dynamics 365 Predictive Lead Scoring is a machine learning model-based predictive scoring mechanism that scores leads on a scale of 1 to 100 based on their likelihood to become an opportunity.

Following are the key benefits of this product capability:

- Out-of-the-box machine learning model that considers attributes from related entities such as Contact and Account apart from the attributes of the Lead entity including custom attributes.
- Ability to select/de-select signals for the model enabling model customization and tuning.
- Predictive score backed by top reasons influencing the score.
- Lead score along with score trend and top reasons available on out-of-box-forms and views.

With Dynamics 365 Predictive Lead Scoring, sales reps can prioritize their efforts on deals that have higher likelihood to convert.

Relationship analytics now with LinkedIn InMail

Relationship analytics is now even smarter with LinkedIn InMail. Relationship analytics helps salespeople manage the opportunities pipeline by analyzing interactions to synthesize the health of customer relationships. By combining the engagement data from Dynamics 365, Exchange Online, and LinkedIn InMail, relationship analytics provides a more accurate view of the health of a sales deal in the opportunity pipeline. Information workers benefit from a holistic analysis of their engagements across multiple channels and can leverage the resultant health score to improve sales efficiency by better prioritizing their time with the deals that need the most attention.

Enhance sales performance and planning with the Dynamics 365 AI for Sales app

The new Dynamics 365 AI for Sales app takes the hassle out of sales performance analysis by proactively and prescriptively providing useful insights from sales data. The app helps sales managers evaluate and improve the performance of their sales teams on Dynamics 365 and other sales applications. With churn measurement and pipeline forecasting using relationship health scores, sales leaders can better optimize their sales strategies.

The following are the key capabilities being surfaced in the app:

- A home page that provides managers with answers to the most common questions regarding their team's performance, and also provides useful insights to quickly allow them to focus on the right deals and activities.
- A natural language processing-based Q&A that allows managers to conversationally ask questions and receive reports from the sales data.
- Lead prioritization leveraging predictive lead scoring.
- Opportunity pipeline analysis using the relationship health score powered by exchange data.
- Sales team performance analysis and individual scorecards.
- Richer sales activity reports using relationship analytics, bringing valuable data from Exchange and Dynamics 365 graphs.

Transform inside sales using AI in the call center

The Microsoft call intelligence offering enables smarter coaching to boost sales conversion rates. By connecting call center telephony recording systems to the app, call center managers can generate conversation insights that bring value from the organization's existing assets.

Key benefits:

- Coaching driven by aggregate call statistics on sentiments, keyword mentions, and KPIs.
- Benchmark against conversational KPIs such as talk-to-listen ratio, longest customer monologue, and participant switch ratio that signal whether reps are aligning with conversation best practices.

Dynamics 365 and non-Dynamics organizations will be able to use the Microsoft call intelligence product capability to generate call insights and increase the output of their reps.

Service

Overview of the Service October '18 release

The October ’18 release introduces new investments in service areas, including Customer Service, Field Service, and the Dynamics 365 Portal.

The latest release of **Dynamics 365 for Customer Service** enables holistic customer engagement across various touchpoints, while improving operational efficiency and organizational productivity. Among the new features is service scheduling powered by Universal Resource Scheduling.

The **Omni-channel Engagement Hub** is a cloud-based service that enables businesses to instantly connect and engage with their customers via newly introduced channels: live chat and SMS. The modern, customizable, and high-productivity app allows agents to engage with customers across different channels via a unified interface.

New investments in **Unified Service Desk** for Dynamics 365 enable it to host web apps using the Microsoft Edge web browser. You also can configure it using the Administrator App built on the Unified Interface framework.

The **Dynamics 365 Portal** October ’18 release provides a tool that can aid in diagnosing portal settings and customization.

Dynamics 365 for Field Service further empowers field service organizations to provide more advanced capabilities that match real-world scenarios. Work orders with multiple resources can be defined and scheduled. Customer expectations can be defined and met though entitlement and SLA functionality. And advanced pricing functionality now enables accurate cost tracking based on roles or other attributes.

With **Dynamics 365 for Project Service**, the focus was on functional and usability improvements that customers have requested. New features include adjustments to approved time, expense, and journal lines; support for multiple time units on a single price list; and configuring a unit of time for estimating work on project tasks.

Overview of Dynamics 365 for Customer Service October '18 release

Dynamics 365 for Customer Service continues to deliver capabilities that empower organizations to deliver efficient and effective customer service to their users. With the latest release, we have focused on enabling user productivity through new experiences, bringing actionable intelligence within customer service operations, and enhancing operational efficiency.

With the new service scheduling solution built on the powerful Universal Resource Scheduling (URS), customers can now work with existing constructs such as service activities while leveraging URS capabilities like resource search and resource sorting, thus enabling effective scheduling.

As part of the latest release, the Customer Service Admin experience is now available within Customer Service Hub, enabling easy, single-point configurations.

Intelligent assistance in the form of suggesting similar cases and knowledge articles (both enabled using Text Analytics API) help provide intelligent insights to Customer Service agents and facilitate quicker and effective case resolution, leading to improved KPIs.

With relevance search on UCI Knowledge Base Search Control, agents get the knowledge article results with improved performance and accuracy within the context of case management.

Customer service health in One Admin Center empowers service organizations by enabling effective monitoring of the service reliability and functionality, helping them to self-solve potential issues before they impact productivity.

Summary of what's new in Dynamics 365 for Customer Service

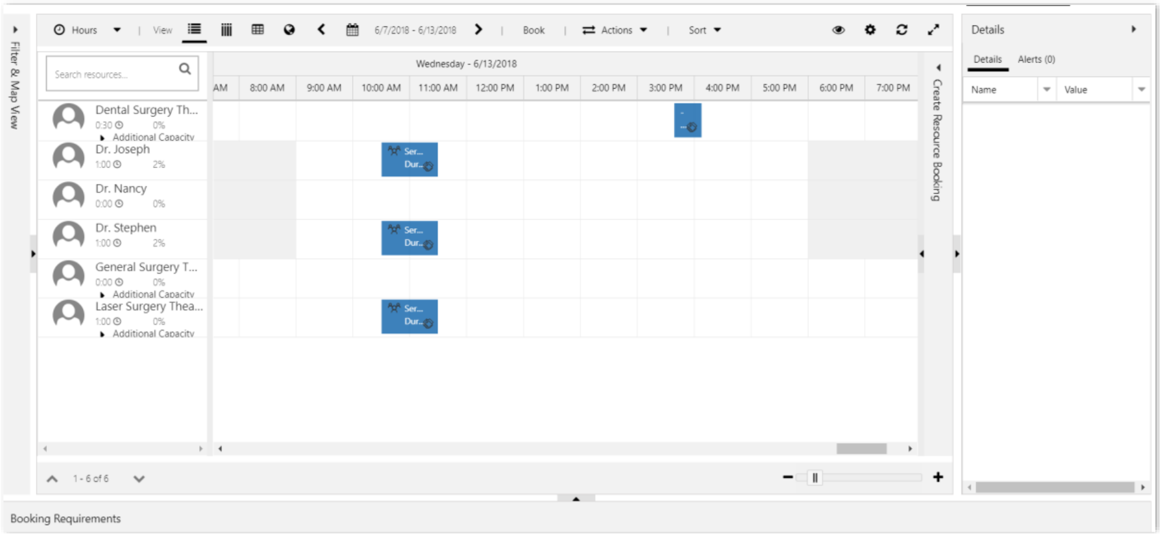
Feature	Release type	Target release month
Service scheduling powered by Universal Resource Scheduling	General Availability	October 2018
Customer Service admin settings	General Availability	October 2018
Suggest similar cases	General Availability	December 2018
Knowledge article recommendation	General Availability	December 2018
Relevance search for knowledge management	General Availability	October 2018
Customer Service health in One Admin Center	Public Preview	December 2018

Service scheduling powered by Universal Resource Scheduling

Service scheduling provides organizations with an efficient way to schedule complex combinations of resources by considering the availability of employees, facilities, and equipment. It benefits organizations in improving service quality and preventing over-scheduling with predictable workloads for employees, as well as ensuring reliable time estimates for customers and clients.

The new service scheduling solution built atop Universal Resource Scheduling (URS) allows customer service organizations to work with the existing constructs such as Services and Service Activities, while leveraging the power of URS functionalities such as Schedule Board - Filter View, Resource search, Resource sorting, and hours/day/week/month view of service activities.

Customers currently using service scheduling on Web Client will be provided with migration tooling to upgrade to the latest solution based on URS.



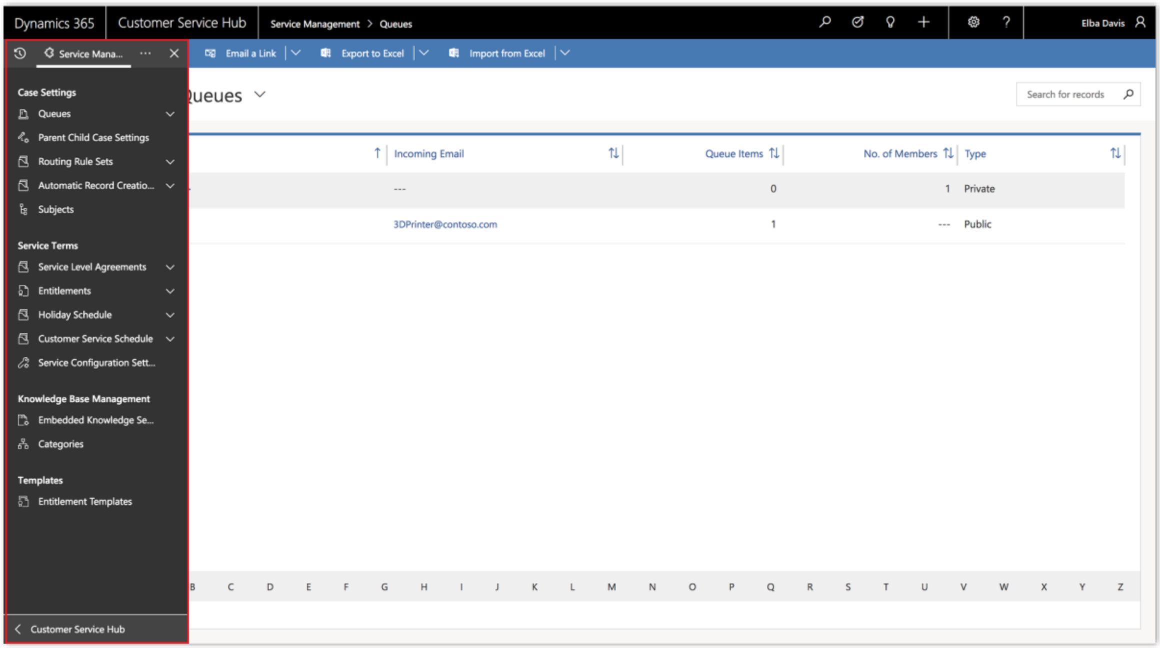
Universal Resource scheduling

Customer Service admin settings

One of the key goals for Dynamics 365 customers is quick deployment of their business processes. The Service Management module helps customer service managers automate various customer service processes, improve agent turn-around time, and lead toward optimum customer satisfaction. Service Management provides an admin the ability to configure and manage customer service tasks such as configuring public or private queues, setting up parent-child case settings, configuring routing rules, configuring automatic record creation and update rules, and setting up service level agreements (SLAs), among other capabilities.

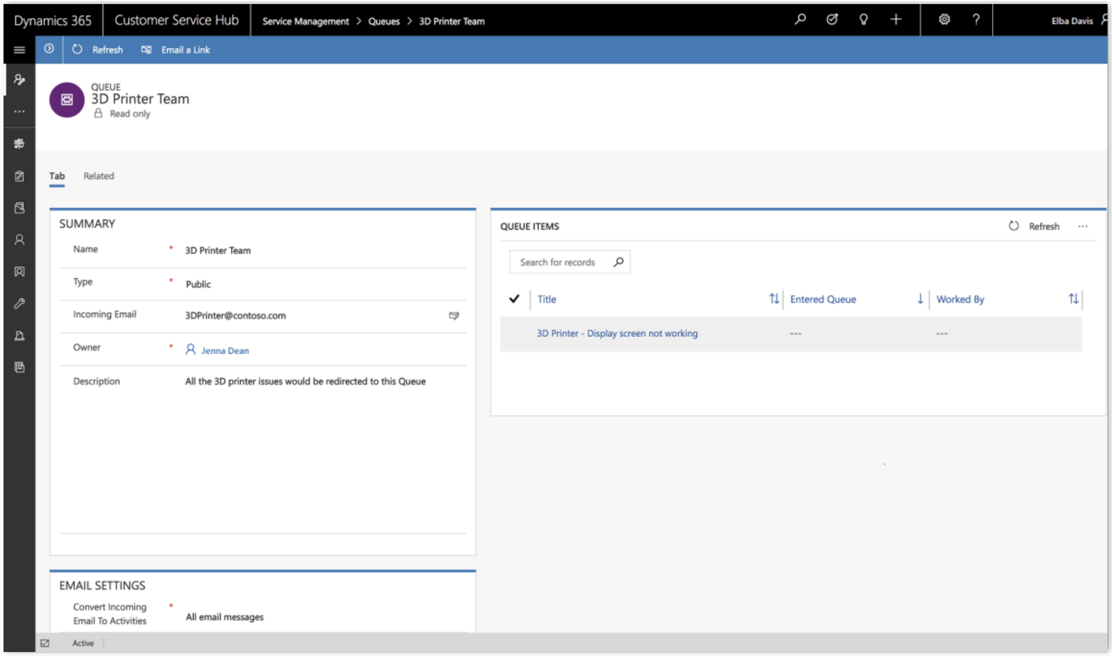
With the latest release, Service Management moves under the Customer Service Hub, enabling customer service managers to access the configurations from inside the application. Built on the Unified Interface, the new Service Management helps to easily configure service tasks, enabling increased productivity.

You can access Service Management through the sitemap in the Customer Service Hub:

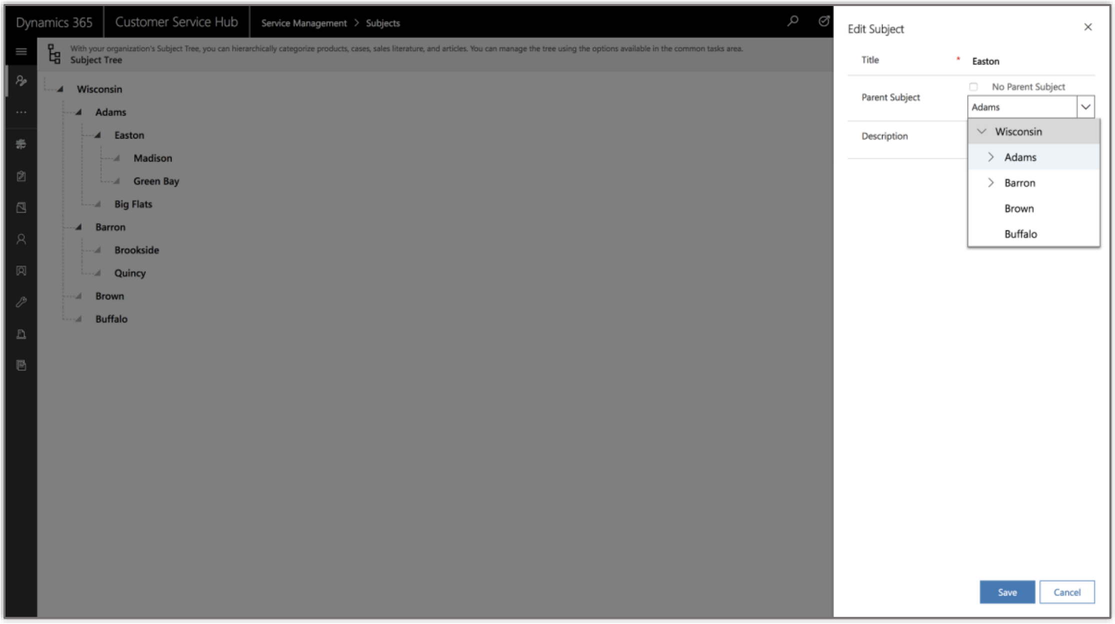


Within Service Management, you can customize various features. These include:

- **Queues**: Queues in Service Management come with a redesigned experience that helps to appropriately prioritize and monitor the progress of the assigned work.

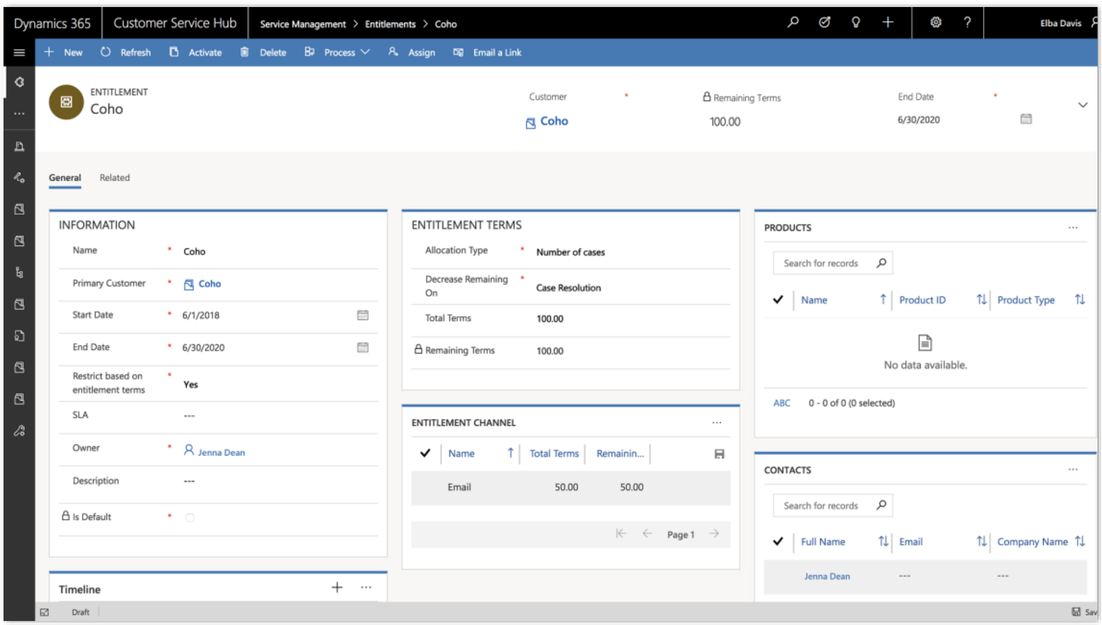


- **Subjects**: Subjects are a powerful mechanism to classify cases, knowledge base articles, products, and sales literature, thereby empowering agents and facilitating quick responses to customers.



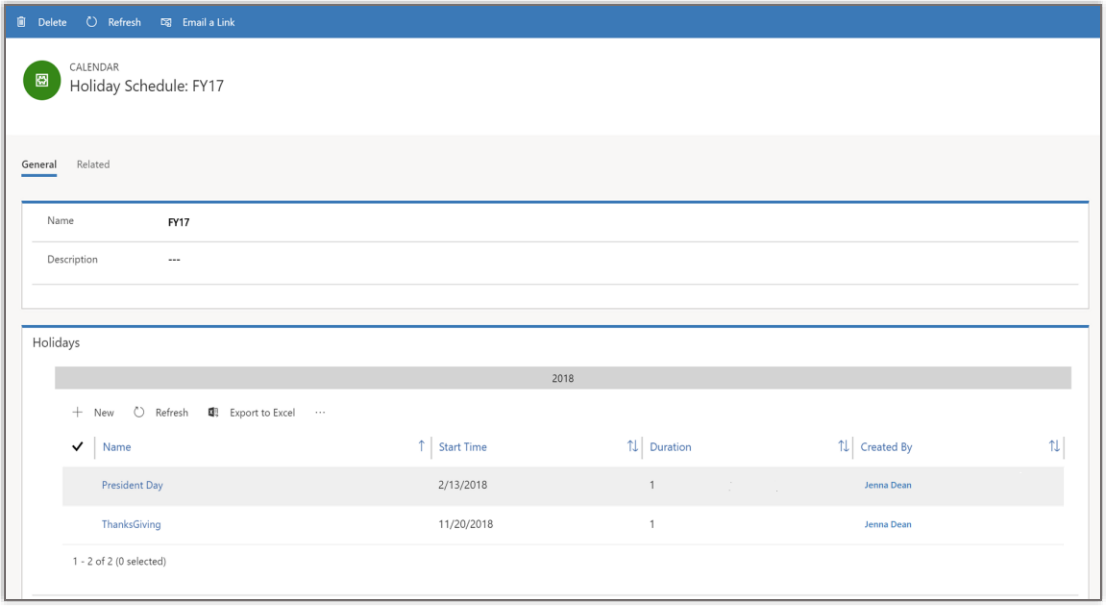
- **Case settings**: With the Parent-Child case settings, cases can be linked together, enabling better response and tracking for common issues.

- **Routing rules**: Routing rules help automatic routing of cases to the right queue, user, or team without any manual intervention.
- **Automatic record creation and update rules**: These rules allow automatic creation or update of a case or related record based on incoming activities like email, social activity, or other categories of activities.
- **Entitlement**: Entitlements help define and quantify the support for which a customer is eligible. The support terms can be specified based on number of hours or number of cases.

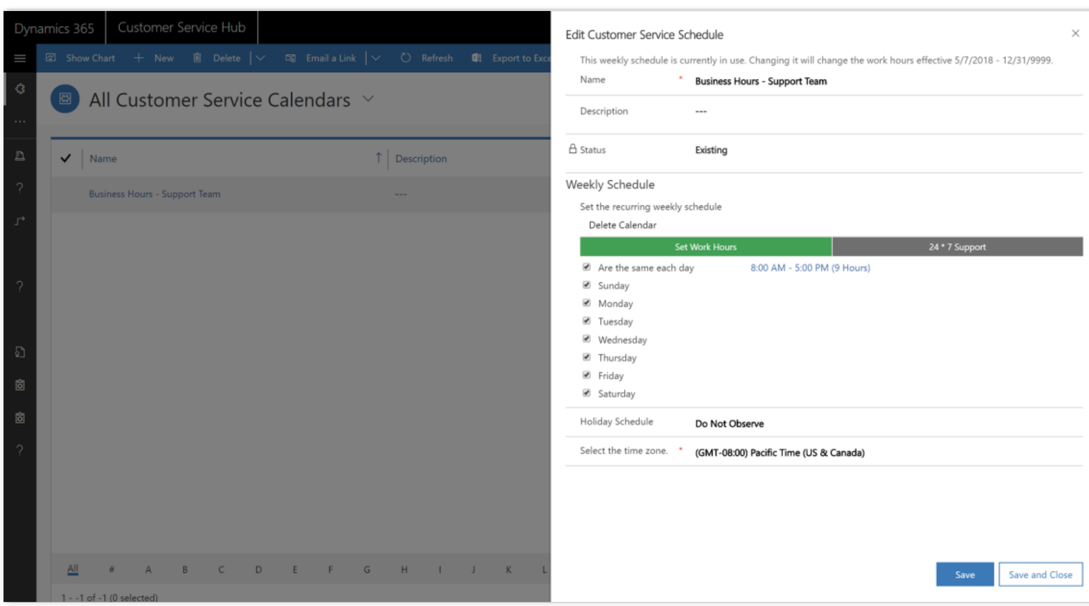


- **Entitlement templates**: Entitlement templates enable a quick configuration experience by allowing reusable templates for setting up entitlements.

- **Holiday schedule**: Holiday schedule lets you accommodate holiday closures so that the SLA is not impacted.



- **Customer service schedule**: Customer service schedule can be used to define the business hours for your team.



- **Service level agreements**: Service level agreements are used for agreement on milestones of the service tasks. Service level agreements adhere to the configurations defined in the holiday schedule and customer service schedule.

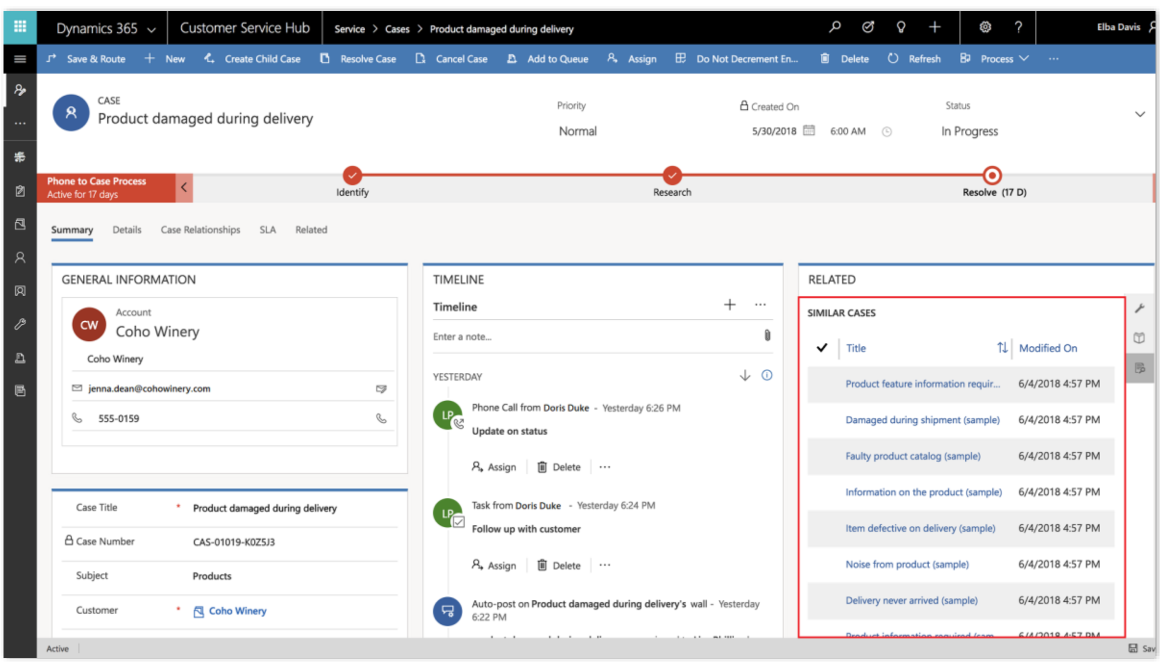
- **Knowledge management settings**: Knowledge management settings are used to enable entities for knowledge management and text analytics.

Suggest similar cases

Resolving a customer service issue during the first contact and within minimal time helps organizations with increased customer satisfaction (CSAT) and reduced operations cost. Typically, in a customer service organization, experienced customer service agents or subject matter experts (SMEs) resolve issues faster based on knowledge or experience gained over a period of resolving similar issues. If agents get a case outside their areas of expertise, transferring the case to an expert agent or consulting an SME leads to increased customer effort and call handling time, resulting in reduced CSAT.

Intelligent insights on similar cases help customer service organizations empower agents with knowledge and expertise that was otherwise available only with experienced agents. Suggestions on similar cases help in leveraging resolution steps across the organization, thus making an inexperienced agent as productive as an experienced one.

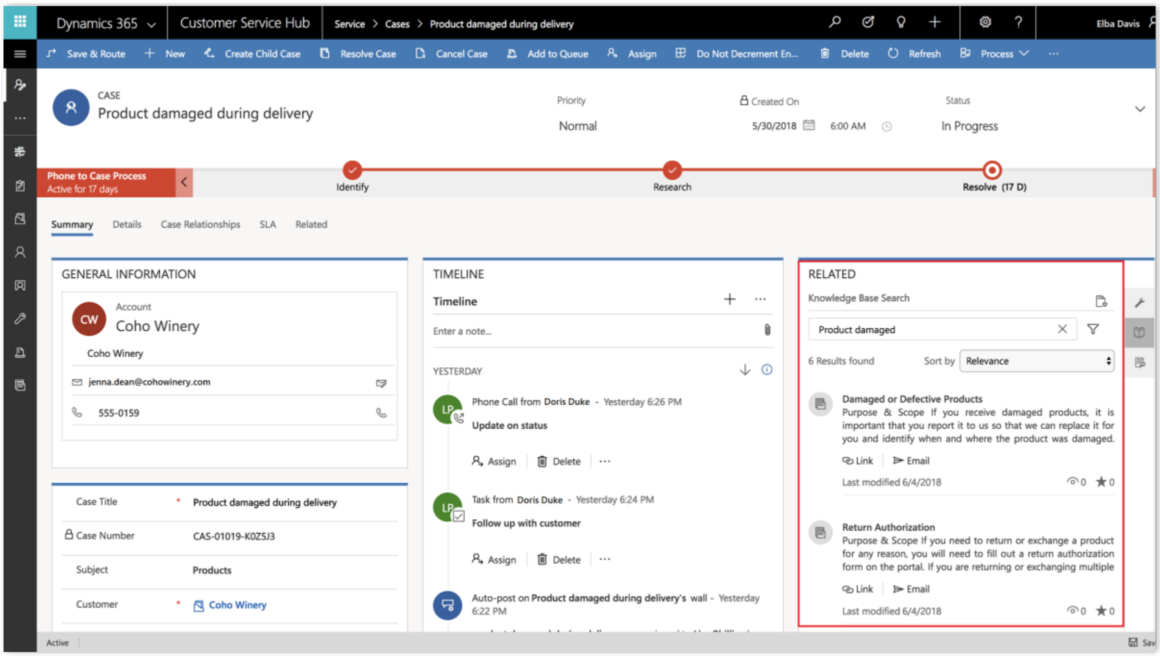
This feature leverages [Microsoft Text Analytics APIs] and case information across different entity records to suggest similar cases. This enables faster and better case resolution, resulting in reduced average handling time (AHT) and improved customer experience.



Knowledge article recommendation

For any customer service organization, knowledge management is vital for improved customer experience and agent productivity. This feature leverages [Microsoft Text Analytics APIs] to provide knowledge article recommendations based on all related entities' data. This gives agents faster access to relevant and contextual knowledge articles, helping them resolve cases quickly.

The following screenshot shows knowledge article recommendations in Dynamics 365 for Customer Service:



With this release, the feature is now generally available across all regions.

Relevance search for knowledge management

Dynamics 365 knowledge base search control delivers knowledge to agents within the context of case management. It is now powered by relevance search to deliver results with improved performance and accuracy.

This feature helps agents choose the most relevant articles quickly by highlighting search term matches in the results list. Moreover, admin customizations help display only the necessary fields in the results list, enabling the agents to obtain essential information at first view. Additionally, agents can search in notes and attachments of knowledge articles from within the case form.

Agents can use this enhanced search on KB search control by default, once the organization is enabled for relevance search. This does not require any additional configuration.

This capability is now available on the Unified Client Customer Service Hub app in addition to Web Client, where it is already available.

Customer Service Health in One Admin Center

One Admin Center provides information on network bandwidth, network latency, app reliability, and performance measures, enabling organizations to monitor the health of the service. It also provides information on time taken by out-of-the-box components versus customizations, thus helping organizations and independent software vendors (ISVs) to assess implementation quality and compliance.

Overview of Omni-channel Engagement Hub October '18 release

The Omni-channel Engagement Hub for Dynamics 365 is a cloud-based service that extends the power of Dynamics 365 for Customer Service to enable customers to instantly connect and engage with their customers via newly introduced channels: live chat and SMS.

Omni-channel Engagement Hub provides a modern, customizable high-productivity app that allows agents to engage with customers across different channels via a unified interface. This app offers contextual customer identification, integrated follow-on actions (for example, create a case/lead), and real-time conversation alerts to ensure agents are working effectively. Supervisors get real-time visibility and insights into the operational efficiency of agents and the utilization across various channels. The enterprise-grade routing and work distribution engine allows customers to configure agent presence, availability, and business priorities, thus ensuring agents are working on the most relevant interactions.

In addition to enabling operational efficiency and visibility, Omni-channel Engagement Hub delivers intelligent insights consisting of information gathered across various engagement channels and the underlying business data. It also enables supervisors to manage agent productivity and channel efficiency by creating, managing, and tracking relevant channel-specific and cross-channel KPIs.

Summary of what's new for Dynamics 365 Omni-channel Engagement Hub

Feature	Release type	Target release month
Agent and supervisor experiences	Public Preview	December 2018
Unified routing and work distribution	Public Preview	December 2018
Live chat channel	Public Preview	December 2018
SMS channel	Public Preview	December 2018
Channel Integration Framework	Public Preview	December 2018
Enable customers to bring their bots	Public Preview	December 2018

Agent and supervisor experiences

Agent experiences

Agents are able to serve customers across all channels from a consistent, easy-to-learn interface. By providing a consistent experience regardless of the support channel, service organizations are able to maximize agent productivity as well as reduce training needs. The ability to handle multiple sessions simultaneously while preserving customer context allows agents to resolve issues faster and meet the KPI goals of the organization.

Key capabilities for agent experiences include:

- Rich multisession experiences for enhanced agent productivity delivered using Unified Service Desk.
- Contextual 360-degree view of customer.
- Contextual view of the current issue.
- Recent interactions with the customer.
- Presence control for efficiently managing work distribution.
- Screen-pops and notifications.
- Search, preview, and sharing of relevant knowledge articles within the context of a session.

Supervisor experiences

To manage the agent workforce and the volumes of customer requests being handled each day, organizations require intraday as well as historical monitoring capabilities.

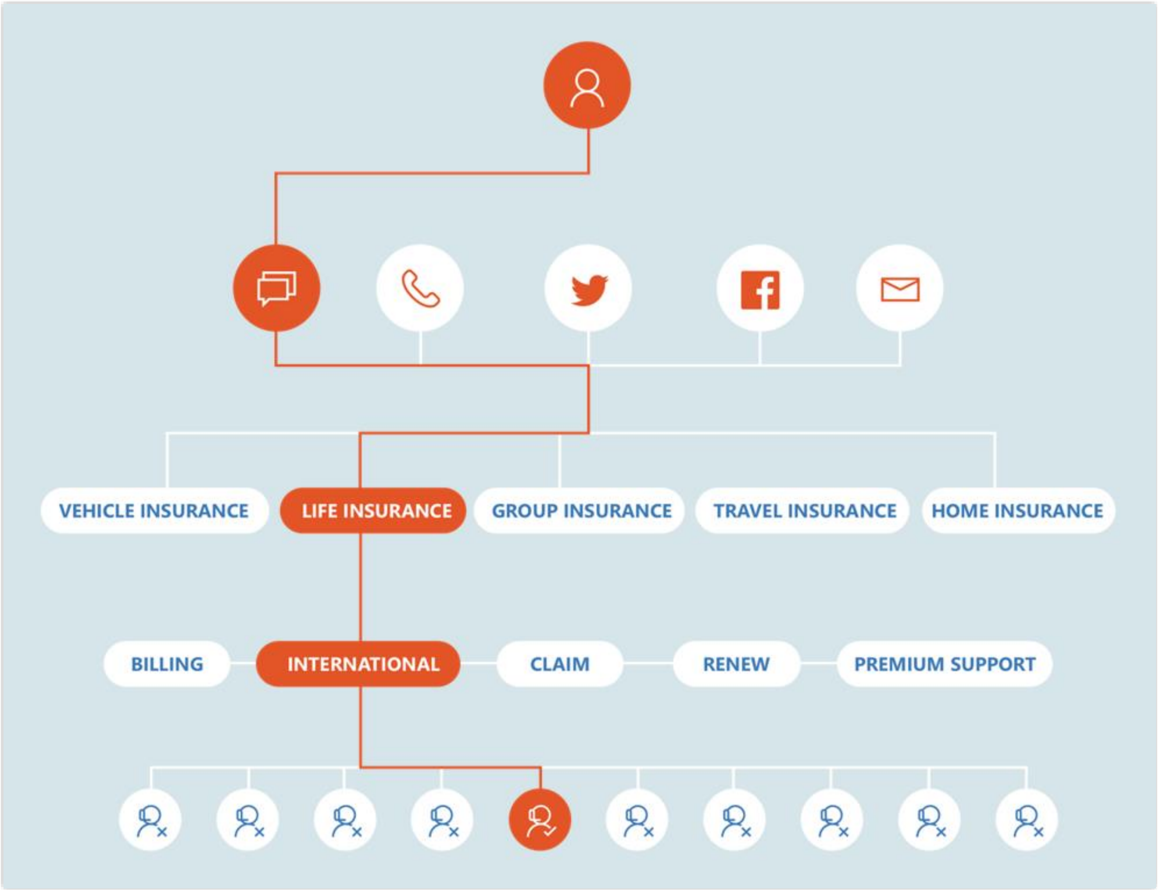
The supervisor experiences will provide the following key experiences:

- Consult agents and transfer conversations to other agents or queues.
- Unified views for different roles within the service operations organization.
  - Experiences for agent managers.
  - Views for operations managers.
  - Organization-wide KPIs and health tracking.
- Intraday health tracking.
  - Tracking of efficiency parameters such as conversations handled and average handling times.
  - Monitoring of agent productivity and performance.
- Real-time conversation monitoring.
  - Supervisors can track conversations and assist agents in resolving the issues in real time.
- Historical reports.

– Analyze historical reports and patterns to optimize agent performance and improve contact center operations.

Unified routing and work distribution

Organizations can leverage the unified routing and work distribution capabilities to route work items originating from chat, messaging, and web portal channels to different customer service support teams within the organization. Through the configuration interfaces, organizations can tightly define the work profile that their agents are supposed to handle. During runtime, the system will automate the flow of work to various agents based on their capacity and availability.



The unified routing and work distribution system can enable organizations to achieve the following objectives:

- Agent attention is always used for the most urgent tasks.
- Organizations can track agent utilization at a granular level and make appropriate process improvements.
- Unify the work items and requests across channels and asynchronous work items like cases, leads, call backs, and scheduled tasks.

Live chat channel

A strategic shift toward conversational messaging among consumers has encouraged organizations to add support beyond traditional customer interaction channels like email and phone. Live chat with its faster problem resolution and customer convenience has emerged as one of the drivers of this new trend.

Key capabilities of live chat channel

- Quick and easy provisioning of multiple chat widgets
- Authenticated and unauthenticated visitor support
- Set up pre-chat, post-chat, and offline surveys
- Customize chat widget theme based on org preferences

SMS channel

SMS channel is a powerful mechanism for organizations to reach and interact with their customers in a timely and convenient manner.

Key capabilities of SMS channel

- Two-way texting between customers and agents.
  - Scenario: Customers can interact with organizations for product inquiry, installation query, support issues, and so on through texts.
- Updating customers with automated SMS notifications.
  - Scenario: Notifications to the customer during case creation, case resolution, appointment reminder, and more.
- Automated response management.
  - Scenario: Welcome message, thank you message, and so on can be automatically sent to customers.

Channel Integration Framework

The Dynamics 365 Channel Integration Framework enables building immersive communication experiences with third-party channel providers. These are the benefits of this framework:

- **Bring your own channel providers into Dynamics 365.** The framework allows you to embed communication widgets in the Unified Interface apps, which can communicate with Dynamics 365 using a standard API set. The framework is inherently channel-agnostic, and can be used to integrate communication widgets catering to one or many of the different channels—for example, voice, chat, and email.

- **Minimize total cost of ownership with cloud-based solutions.** It is a platform-independent, browser-independent, and zero footprint (no adaptors need to be deployed on agent desktops) framework for integrating communication widgets. Dynamics 365 will provide a plug and play configuration mechanism for communication widgets based on the framework, making it easy to deploy, manage, and upgrade.

- **Customize for your business workflows.** With this framework, many key communication scenarios, such as search and screen pop based on incoming communication parameters (such as phone number) and click to dial, can be automated. It also provides ways to perform CRM operations like creating a new record or updating an existing record from the communication widget.

Enable customers to bring their bots

Today, consumers are increasingly demanding that companies serve their needs and meet their requirements quickly, efficiently, and accurately. At the same time, there is a strategic shift toward use of self-service channels, with customers looking to solve product or service issues themselves.

Recent evolution in machine learning technologies, natural language research, and linguistic analysis, along with the ability to provide scalable, immediate, and contextual assistance, has made self-service tools like chatbots (or virtual agents) a key necessity to be incorporated within an organization's customer service operations.

Apart from the ubiquity and nonstop availability offered by these chatbots, interactions with them could also be analyzed in regard to understanding consumer sentiment, level of engagement, and product feedback. Integration of intelligent bots within customer service operations positively impacts customer service KPIs like average handling time and average number of cases, while simultaneously reducing cost.

Bring your bot to Omni-channel Engagement Hub

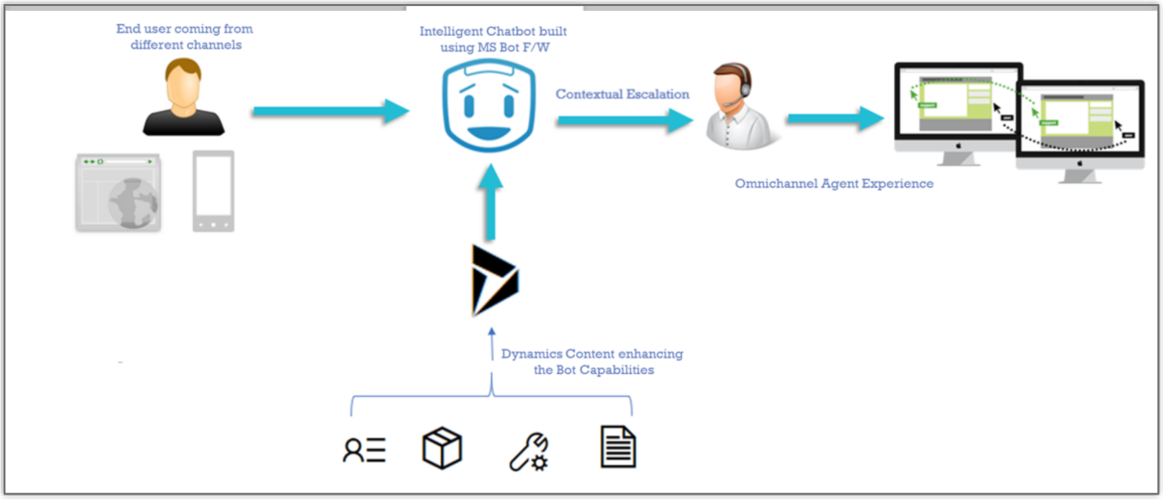
With Omni-channel Engagement Hub, customers can now bring their own bots (built on Microsoft Bot Framework) and connect them with the Omni-channel Engagement Hub ecosystem.

As part of the Bring Your Own Bot feature, customers can now:

- Configure their bots in Omni-channel Engagement Hub through a simplified setup experience to enable routing of conversations to bots.
- Provide seamless, contextual escalation with consistent experience for end users.
- Enable agent productivity with rich bot-user conversation transcript and chat context.

Intelligent conversational bots at the frontline help to deflect the routine queries, while maintaining a natural experience for users. Integration with Omni-channel Engagement Hub enables a smooth, contextual handoff to the agents, helping them to focus on complex queries, while empowering them with relevant information, leading to a good experience for end users.

Schematic representation for customer-owned bots with Omni-channel Engagement Hub



Overview of Unified Service Desk October '18 release

Unified Service Desk for Dynamics 365 provides a configurable framework for quickly building applications for call centers so that agents can get a unified view of the customer data stored in Dynamics 365. As part of the October '18 release, you can:

- Use Unified Service Desk to host web applications like Dynamics 365 pages (Web Client and Unified Interface) using the Microsoft Edge web browser.
- Configure Unified Service Desk using the administrator app built on Unified Interface framework. This capability is in addition to the existing Web Client configuration experience.

Summary of what's new in Dynamics 365 Unified Service Desk

Feature	Release type	Target release month
Using edge process for hosting web applications in Unified Service Desk	Public Preview	October 2018
Unified Service Desk admin experience on Unified Client	General Availability	October 2018

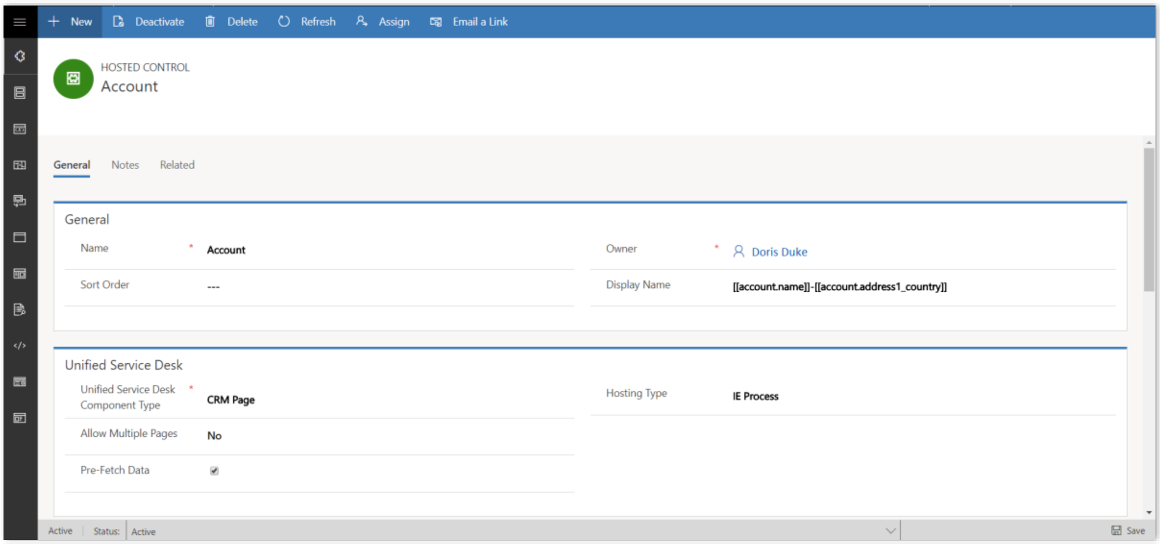
Using Edge process for hosting web applications in Unified Service Desk

Administrators will be able to configure the Microsoft Edge browser to open web applications in Unified Service Desk. This will bring the performance and reliability enhancements of Microsoft Edge to Unified Service Desk users, along with other benefits that a modern browser like Microsoft Edge brings. This preview capability will be available only for deployments upgraded to the latest version of the Windows 10 operating system.

Unified Service Desk admin experience on Unified Client

Unified Service Desk for Dynamics 365 provides a configurable framework for quickly configuring applications for call centers so that agents can get a unified view of customers from Dynamics 365 and from other line of business applications.

With this release, you can now configure Unified Service Desk on Unified Interface. This new experience is in addition to the existing Web Client experience. The new experience built on Unified Interface provides benefits such as faster, responsive, and adaptive UI along with accessibility compliance.



Unified Service Desk admin experience

Overview of Dynamics 365 Portal October '18 release

Dynamics 365 Portal enables organizations to easily extend entities, features, and functions of Dynamics 365 to external audiences like customers and partners.

In the October '18 release, we have invested in a tool that can aid in diagnosing portal settings and customization. We have also invested in integrating the portal with other Microsoft services and in simplifying the customization experience of the portal.

Fundamentals

With a series of platform changes over the last few months, Dynamics 365 Portal is now more reliable and performant than ever. You will see improvements across the board spanning provisioning and solution updates to improvements in cache latency. In this release, we continue to prioritize improving the fundamentals of the product with a self-serve tool to diagnose potential issues with portal settings and customization.

Integration with other Microsoft services

We have focused on providing a seamless and consistent experience to portal users using Office 365 and other Microsoft services. With our *SharePoint Integration*, portal users can upload and view documents from the SharePoint online document library, enabling businesses to leverage their investments in SharePoint. In addition, we are providing the ability to *embed Power BI charts* within a portal, allowing users to benefit from the interactive visualizations of Power BI.

Usability

Most, if not all, customers end up customizing their portal to meet their unique look and feel and process needs. We have reimagined key customization experiences, making them simple, intuitive, and modern.

Summary of what's new in Dynamics 365 Portal

Feature	Release type	Target release month
Configuration migration	General Availability	October 2018
Embed Power BI visualizations	General Availability	October 2018
Restrict portal access by IP address	General Availability	October 2018
Manage SharePoint documents	General Availability	October 2018
Simplified customization	Public Preview	October 2018
Self-service portal diagnostics	General Availability	October 2018

Configuration migration

Portal development involves several configurations and customizations to achieve a desired experience for portal end users. To reduce the time and effort required to manage portal configuration across environments, we are publishing schema for configuration migration that works with the Configuration Migration SDK tool.

Portal customizers use various ways, including creation of schema files from scratch, for the Configuration Migration SDK tool to move configurations to different environments, typically development, test, and production. Creating schema from scratch can be time-consuming, sometimes causing partial data migration, and can be error-prone.

All Configuration Migration SDK tool capabilities can be used with this schema to manage portal configuration:

- **Create schema**: The schema can be tailored for the implementation using standard ways provided by the tool. Schema files can be loaded in the tool and altered to add, remove, and modify entities, attributes, and so on to suit configuration migration needs.

- **Export data**: Use the schema file to export data from an environment into a .zip file, and use it for backup, source control, or importing into a target environment.
- **Import data**: Use the exported data to import into a target environment.

We'd like to thank

Thank you for submitting this idea with votes and comments that helped us prioritize it.

Embed Power BI visualizations

Power BI is one of the best tool to deliver insights with simple and interactive visualization. Considering Power BI features and the use cases it enables for portal users, this feature remains one of the top-voted ideas. Currently, there is no easy way to embed secure Power BI reports in a portal, and with this feature we will be streamlining Dynamics 365 Portal and Power BI integration.

Administrators will be able to configure and enable Power BI for a portal. This will require an appropriate Power BI license. Customizers can use liquid code to embed Power BI dashboards and reports within pages. While embedding the Power BI content, customizers can use filter parameter to create personalized views.

Embedded Power BI content will be available to portal users who don't have an account for Power BI.

We'd like to thank

Thank you for submitting this idea with votes and comments that helped us prioritize it.

Restrict portal access by IP address

Security is a key concern for applications and it becomes more paramount for an external-facing application like Dynamics 365 Portal. As part of this release, we will add capabilities for customers to be able to restrict access to their portals from certain IP addresses. This will help organizations that are looking to restrict their portals from fixed locations like internal company networks. Also, this will help customers who are in a development phase and want to make sure their data doesn't get leaked because of a bad configuration.

This feature would allow administrators to define a list of IP addresses that are allowed to access your portal. The allow list can include individual IP addresses or a range of IP addresses defined by a subnet mask. When a request to the portal is generated from any user, their IP address is evaluated against the allow list. If the IP address is not in the list, the portal replies with an HTTP 403 status code.

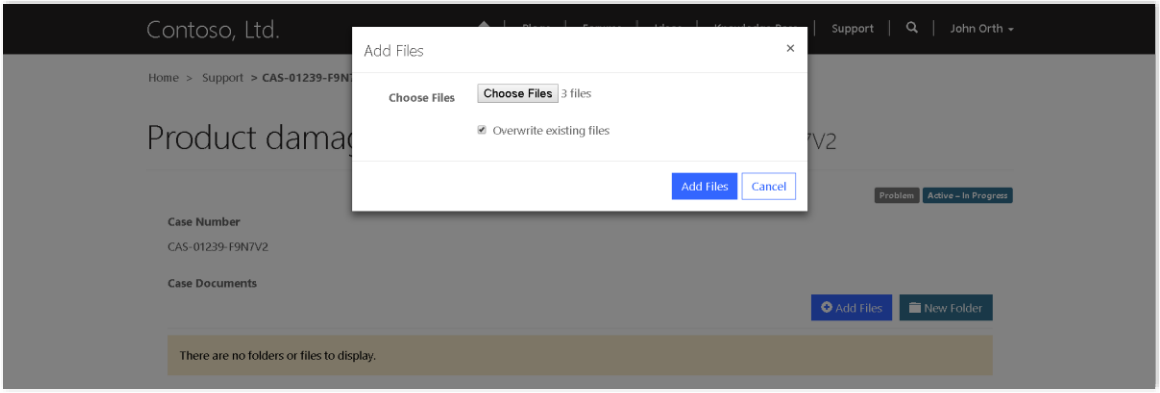
Manage SharePoint documents

This feature extends document management capabilities of Dynamics 365 applications to portals, providing a consistent experience and allowing customers to leverage their existing investments in SharePoint with Dynamics 365 for document management.

Documents associated with entity records can be managed by portal users as they are stored in a SharePoint document library, thus also enabling businesses to leverage the seamless collaboration capabilities offered natively by SharePoint.

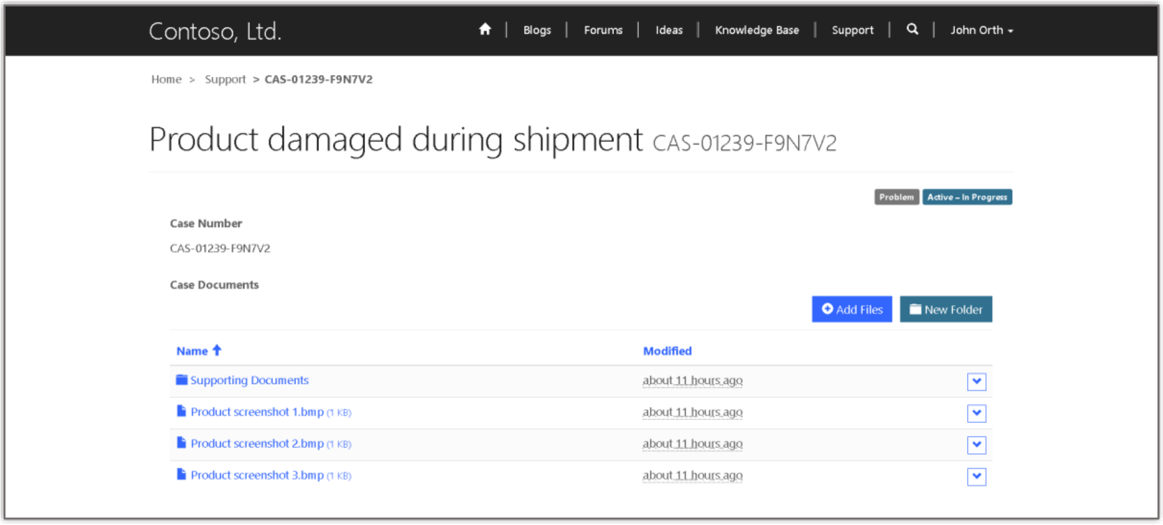
SharePoint Online document libraries configured with entities in Dynamics 365 can be surfaced via portal entity and web forms. This allows portal users to perform the following actions:

Add documents



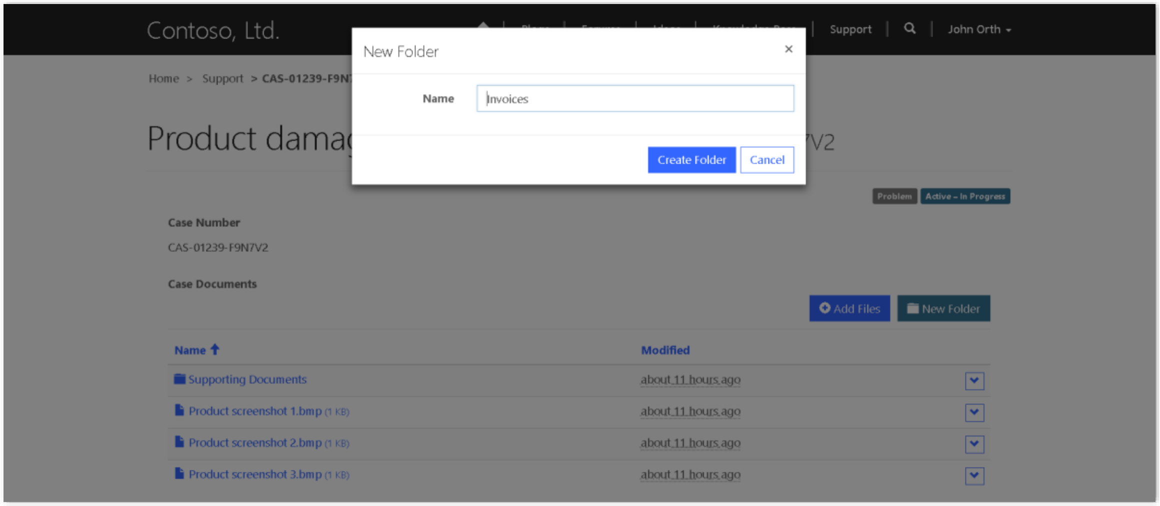
Add files to a case record

View and download documents



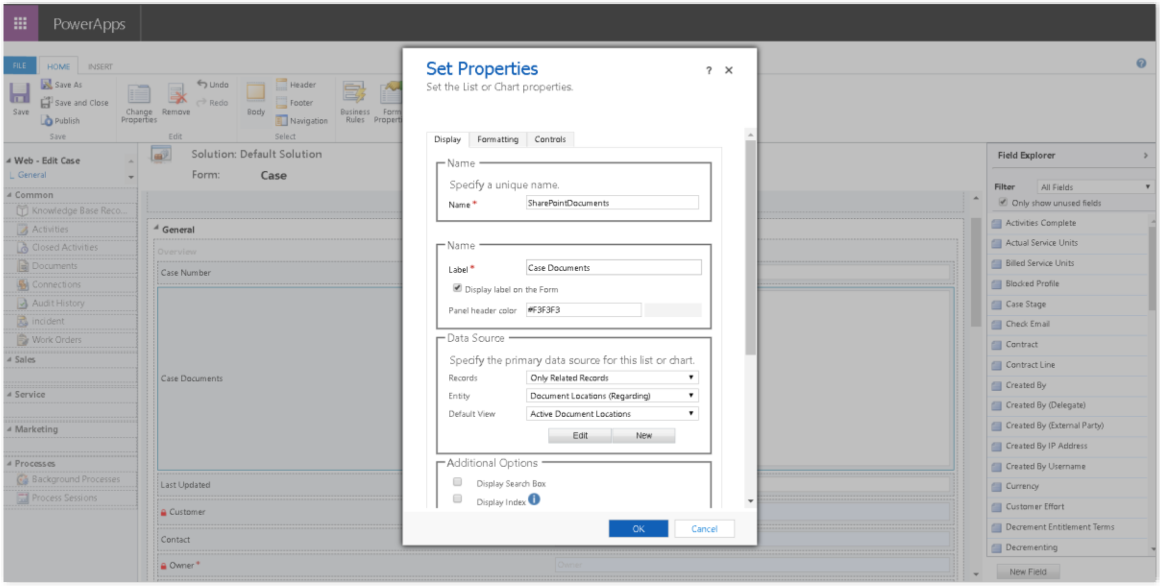
View documents related to case record

Create folder



Create subfolder within document list to organize files

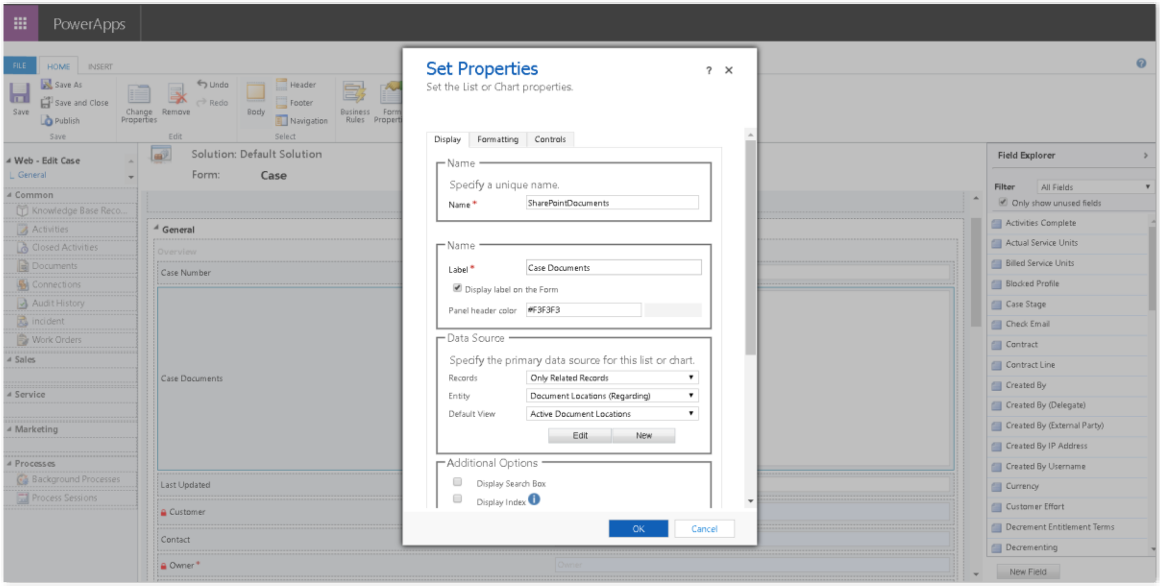
Delete document



Delete files from a case record

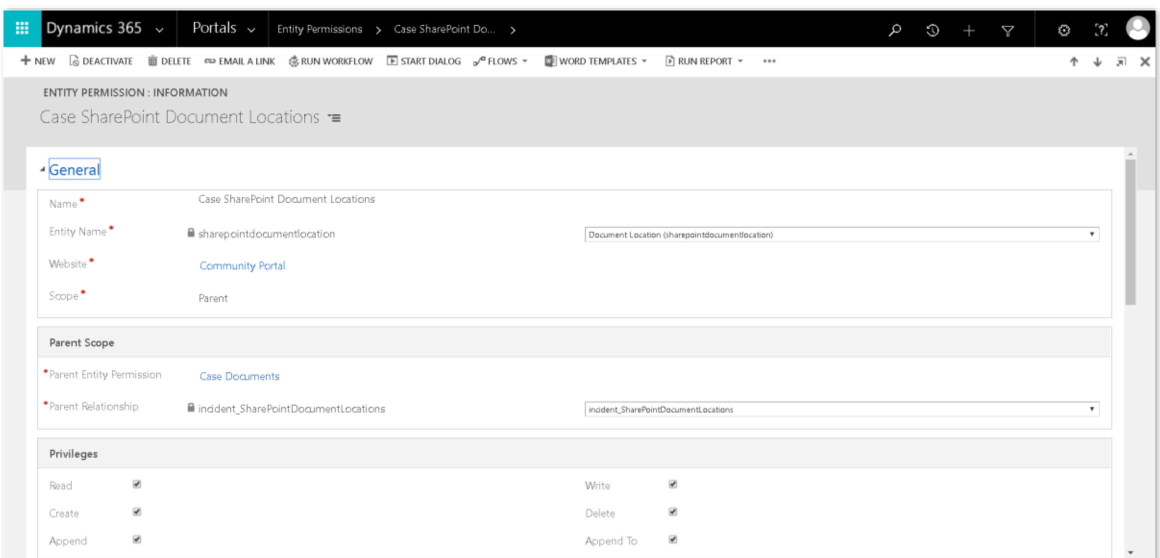
Quick steps

Configuring document list on entity forms



Configure document list subgrid on case entity form

Configuring permissions on document list



Configure document list permissions

A permissions-based model allows controlling these actions on files and folders for specific customer scenarios.

We'd like to thank

Thank you for submitting this idea with votes and comments that helped us prioritize it.

Simplified customization

With our focus on simplifying customization of Dynamics 365 Portal, we have targeted enhancements for portal customizer and administrator personas respectively. An intuitive experience abstracts data model complexities, lowers the learning curve for portal customization, and leads to increased user productivity. Providing a persona-focused tool will also lay a foundation for differentiated experiences in upcoming releases.

Customizers and administrators benefit from:

- WYSIWYG-based content editors that help craft beautiful visual experiences.
- Modern and intuitive web page authoring experience.
- Improved sitemap configuration that helps users manage navigation and page hierarchies efficiently.
- Contextual component configuration and administration for improved productivity.

Self-service portal diagnostics

Dynamics 365 Portal helps organizations create websites in a simple and effective manner. As part of our investment to improve supportability of Dynamics 365 Portal, we are focusing on better diagnostics and providing customizers with the ability to resolve issues on their own using self-service diagnostic capabilities.

This feature provides a self-service diagnostic tool that looks at portal configuration and identifies potential configuration problems as well as provides solutions on how to resolve the issues. This tool can be used by portal customizers to quickly resolve common issues and reduce the amount of time spent on diagnosing any issues.

Overview of Dynamics 365 for Field Service October '18 release

Microsoft Dynamics 365 for Field Service helps organizations deliver differentiated field service experiences to their customers.

The latest release further empowers field service organizations to provide more advanced capabilities that match real-world scenarios:

- Work orders with multiple resources (crews) can be defined and scheduled.
- Customer expectations can be defined and met though entitlement and service level agreement (SLA) functionality.

- The organization can be more efficient through more accurate work durations based on actual historical results.
- Advanced pricing functionality now enables accurate cost tracking based on roles or other attributes.

Field Service technicians will now be more visible and effective with notification, chatbots, and real-time location tracking. This can all work seamlessly with the back office based on the available integration across Dynamics 365 for Finance and Operations.

Scheduling

The Dynamics 365 resource scheduling capabilities now make it easier to embed scheduling experiences to find the right resource, in the right place, in the right time slot. This can occur within a customer support experience or it can be enabled in another customer-facing app such as a customer-built PowerApp leveraging the sample made available by Microsoft. Organizations now have more flexibility to manage resource availability in the scheduling process.

There are new capabilities within Resource Scheduling Optimization (RSO) as well. Enhanced objectives will take preferred resources and skills-matching into account. A new action is available to (re)optimize a specific resource as needed. Configuration of RSO to specific business needs is made easier in this release with the enhanced "what if" capability and statistics.

Connected Field Service

The Internet of Things (IoT) continues to enable proactive and predictive service. Connected Field Service and Microsoft Azure IoT Central continue to evolve together to provide an intelligent software as a service (SaaS) for connected devices. Building on previous integration, bidirectional flows are now supported. For example, sending updates from Field Service though IoT Central to the device.

Summary of what's new for Dynamics 365 for Field Service October '18

Overall Field Service

Feature	Release type	Target release month
Integration with Finance and Operations	General Availability	November 2018
Entitlement management	General Availability	November 2018
Multi-resource scheduling (for work orders)	General Availability	November 2018
SLA management	General Availability	November 2018

Field Service Mobile

Feature	Release type	Target release month
Integration with Microsoft Bot Framework	General Availability	November 2018
Background location sharing	Public preview	November 2018
Push notifications	Public Preview	November 2018

Universal Resource Scheduling (URS)

Feature	Release type	Target release month
Define groups of requirements with conditional logic	General Availability	November 2018
Multi-resource scheduling	General Availability	November 2018
Schedule predefined resource crews	General Availability	November 2018
Resource pools	General Availability	November 2018
Facility scheduling	General Availability	November 2018
Fulfillment preferences	General Availability	November 2018
Capacity scheduling	General Availability	November 2018
Schedule board split view	General Availability	November 2018
Extensible resource availability	Public Preview	November 2018
In-form scheduling	Public Preview	November 2018
PowerApps sample app	Public Preview	November 2018
Self-service scheduling APIs	Public Preview	November 2018
Resource Utilization View	Public Preview	November 2018
URS customer-driven product enhancements	Public Preview	November 2018

Connected Field Service (IoT)

Feature	Release type	Target release month
Enhanced IoT Central integration	General Availability	November 2018

Resource Scheduling Optimization

Feature	Release type	Target release month
Enable More Objectives	General Availability	November 2018
Single Resource Optimization	General Availability	November 2018
What-if analysis statistics	General Availability	November 2018

Integration with Dynamics 365 for Finance and Operations

This integration allows for master data (account, product, and pricelist) and work order data to be pushed to sales orders when work orders are marked as closed. It also offers warehouse, purchase order, and invoice integration.

Entitlement management

Field Service has extended the current entitlement functionality enabled in the Customer Service application for its relevant scenarios. This allows for levels of support to which a customer is entitled to be specified in the field service context. Example entitlements include accounts, contacts, products, work orders and work order performance metrics.

Multi-resource scheduling

Multi-resource scheduling allows for multiple resources to be scheduled against a single work order. This has been a common request from customers who have complex work orders requiring more than a single resource to complete the work. Incident types will be able to be related to requirement group templates so that when you create a work order and select an incident type, a group of requirements can be added to the work order, lighting up multi-resource scheduling. The infrastructure for multi-resource scheduling was included in Universal Resource Scheduling (URS) in Spring '18 as a preview, October '18 GA, and is now being leveraged by Field Service starting with the October '18 release.

SLA Management

Field Service also has enabled service level agreement (SLA) capability to establish SLAs for customers and populate SLA details into work orders. This enables the scheduling processes to take into account commitments based on SLAs.

Background location sharing

Our mobile application now allows for technicians to share their current locations, which will result in a location data stream getting sent to Dynamics 365 for Field Service that surfaces a technician's location on the schedule board and allows for events to be triggered based on a technician's current location. For example, when technicians arrive on site, a push notification can be sent to remind them to update their status. This will also open scenarios where we can detect that a technician is going to be late to a work order based on current location and consequently reassign the work order to another technician nearby.

Microsoft Bot Framework integration

Most field service work involves a set of the same steps that are repeated on any given job: update the status of a work order to traveling, open the directions for a work order, view the service tasks for a work order, and so on. These tasks can be streamlined through conversational and even hands-free experiences as opposed to requiring technicians to click through a mobile application.

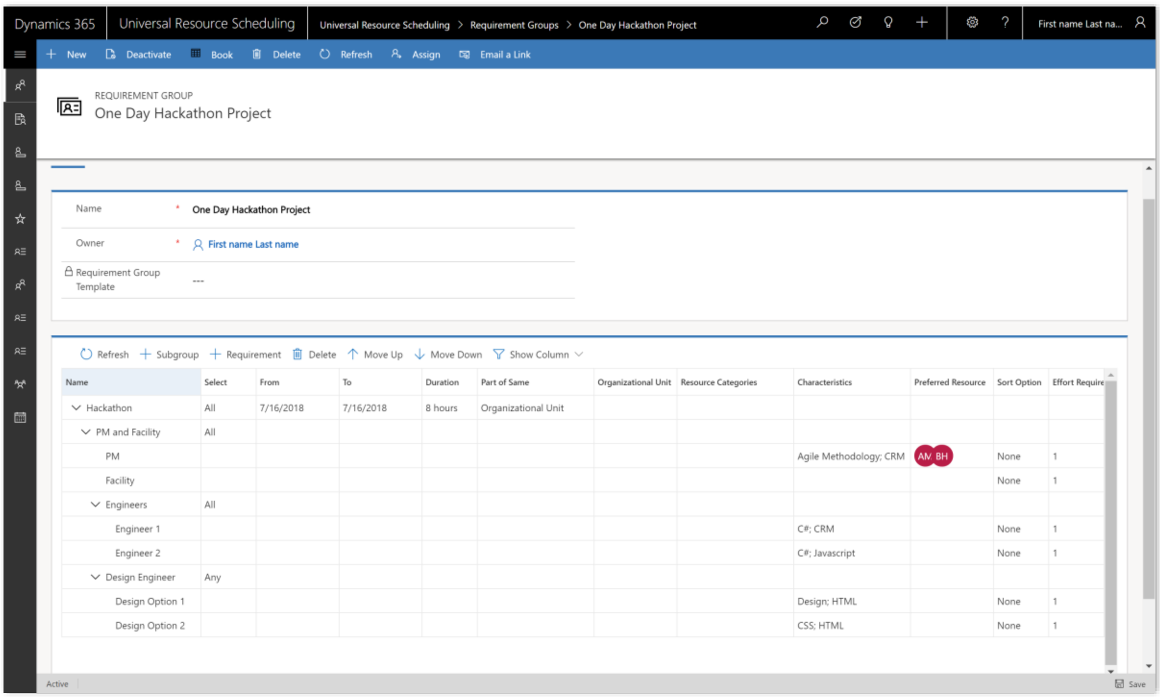
We now provide the ability to surface a bot developed with the Microsoft Bot Framework in our mobile app as well as template bot code interfacing with Dynamics to get your own bots up and running quickly for use by technicians to get their work done faster. We handle the authentication of your bot to your Dynamics 365 CE organization so that there is no need to have the user authenticate twice.

Push Notifications

Out of the box, our mobile application now allows field service technicians to receive push notifications any time they are assigned a booking, one of their bookings has changed, or when they have arrived onsite for a work order (provided location is being shared). When and how push notifications are triggered is entirely configurable and can be customized for any use case. Push notification reminders can improve the timeliness of technicians and accuracy of logging.

Create groups of requirements for scheduling

Create requirement groups consisting of multiple requirements and schedule teams of resources. For any given requirement group, resource requirements can be defined using a grid-based control that allows for requirements to be organized in a hierarchical manner and with all/any conditions.

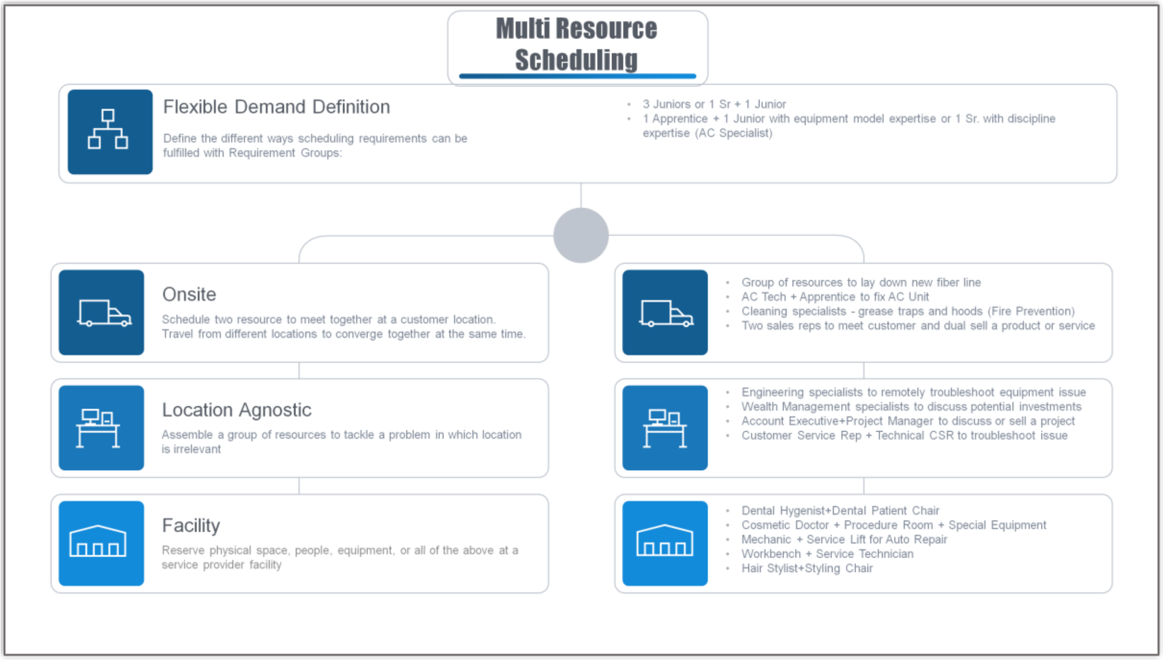


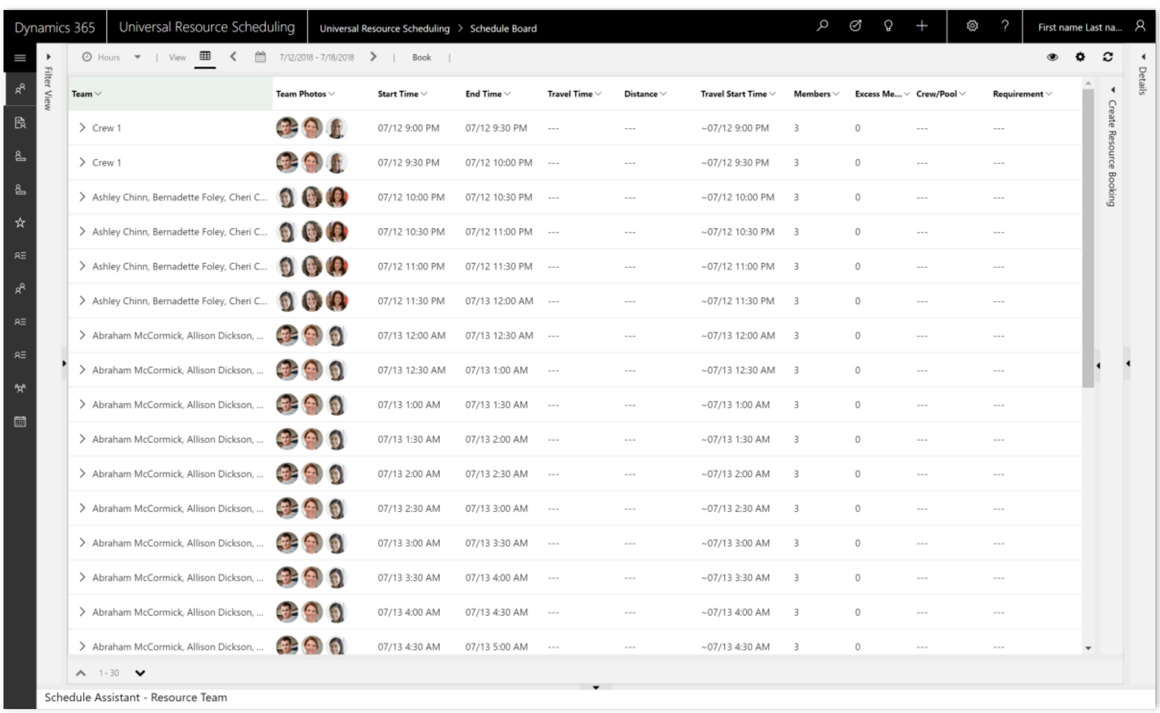
Requirement group control

Multi-resource scheduling

Dynamically assemble a group of resources to converge at the same time for intraday scheduling. Resources can be teamed together to meet onsite at a customer location, work together remotely, or fulfill appointments at facilities.

- Search across the multiple configurations of how the team can be assembled, set up on the requirement group.
- Mix and match:
  - Pools and individual resources
  - Individuals and crews
  - People, equipment, and facilities
- Consider resource availability and current commitments.
- Predict travel time and assemble a team to meet onsite with a customer both for preassembled crews and dynamically putting a team together.
- Facility - Assemble a group of resources staffed at a specific location.



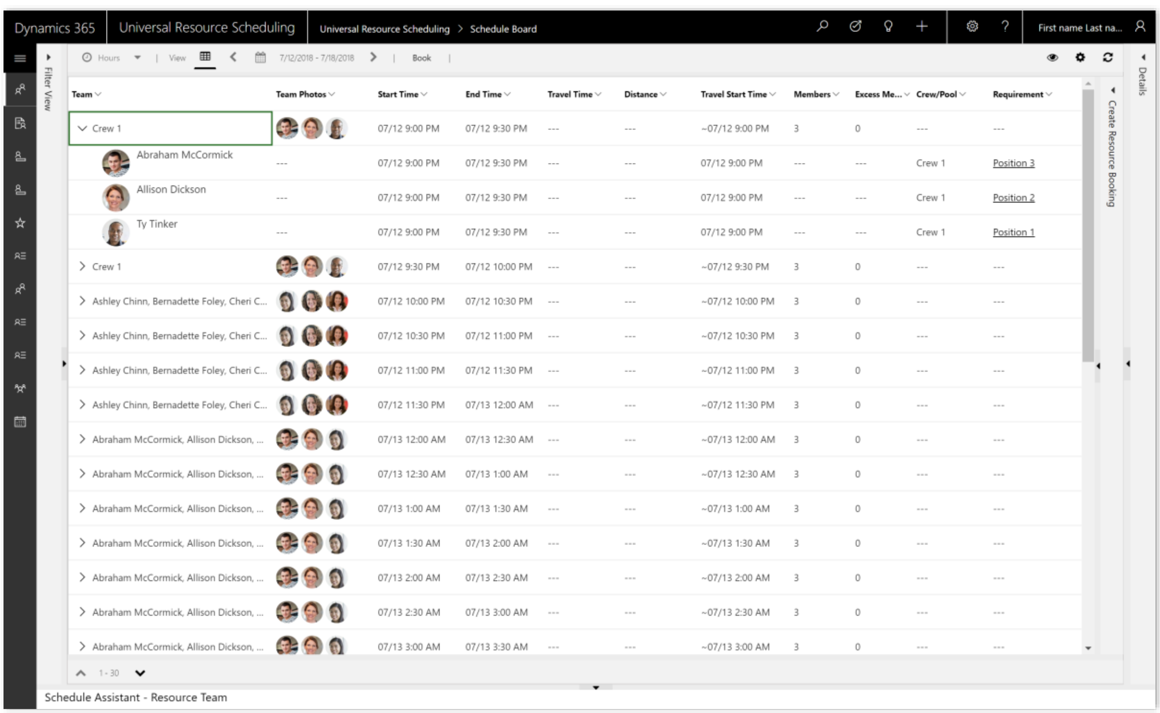


Finding availability for a team of resources

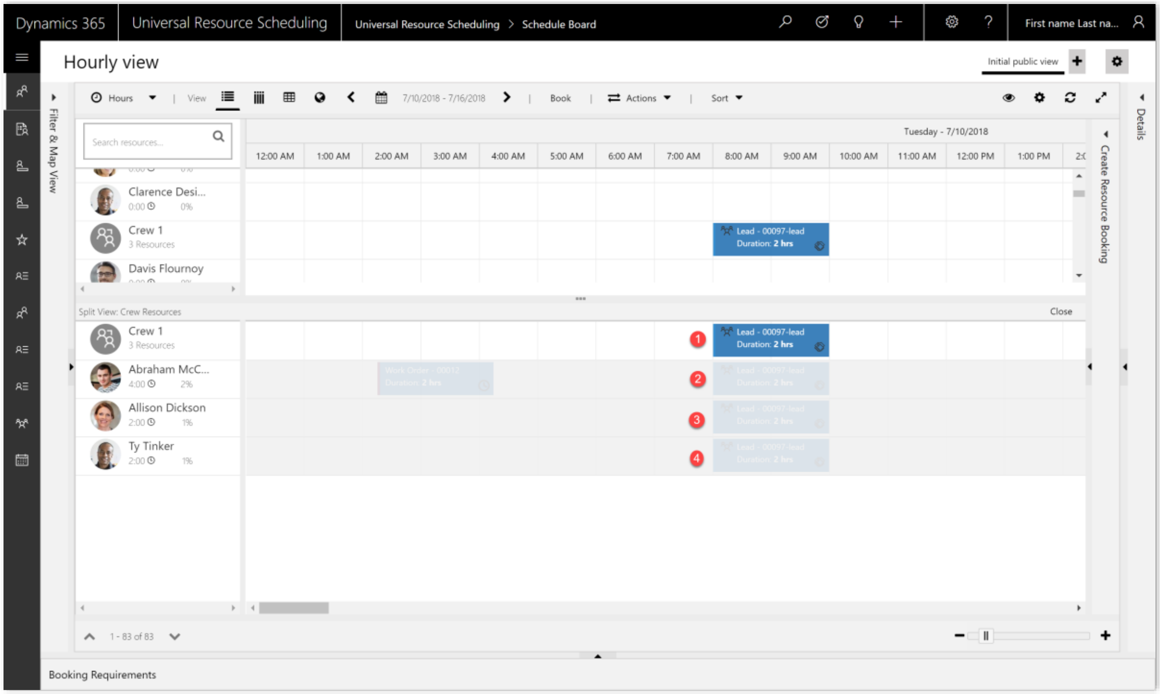
Predefined crews

Preassemble groups of resources that are always together for intraday scheduling. Crew scheduling allows you to define a group of resources who are scheduled for the same work during a period of time. Typically, a crew meets at a location in the morning, shares a vehicle, and is together all day from job to job. Companies focused on services that generally require teams of resources to accomplish jobs will often predefine a crew, a set of resources that stick together all day.

- Sample scenarios:
  - Lead technician and apprentice (for example, HVAC)
  - Maid services
  - Sanitation services
  - Moving services
  - Landscaping
  - Hood and grease trap cleaning > Crews are assembled with date effectivity, enabling a crew to be assembled for as long or as little time as you choose.



Schedule Assistant booking crew



Schedule Board with crew

Resource pools

Associate resources to resource pools to enable schedulers to book requirements to a generic pool without needing to decide which resource will actually perform the work.

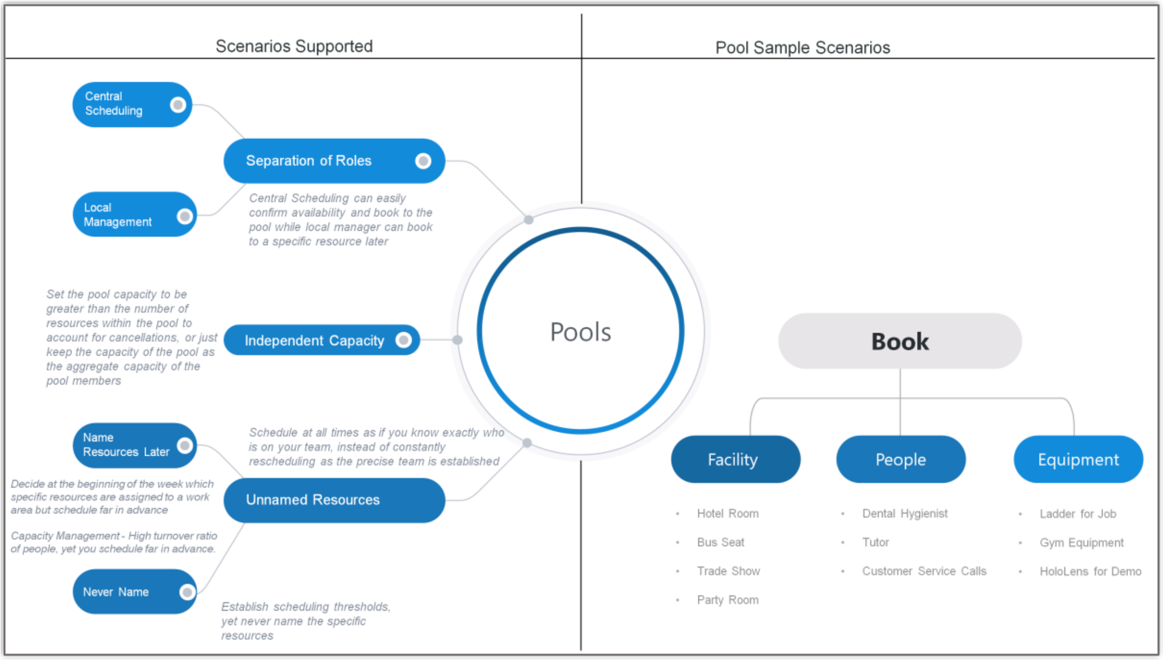
Why?

- Avoid being forced to book specific resources up front and instead book the "resource pool" while ensuring you are not overcommitting.
- Enable central schedulers to be shielded from details and leave the details to the local resource manager.
- Specific resources may not be named yet but capacity of the pool is established and resources will be named later. Schedulers can still schedule since capacity of the pool can be set as if all the resources were named (capacity management).
- Deliberately enable overbooking for expected cancellations.

What?

- Resource pools can be either pools of facilities, or pools of accounts/contacts/users, or pools of equipment. Pools are intended to be a set of homogenous resources.
- Pool members can be permanently or temporarily assigned to pools, date effective.
- Optionally derive overall pool capacity from pool members.

Onsite requirements not planned to be supported with resource pools



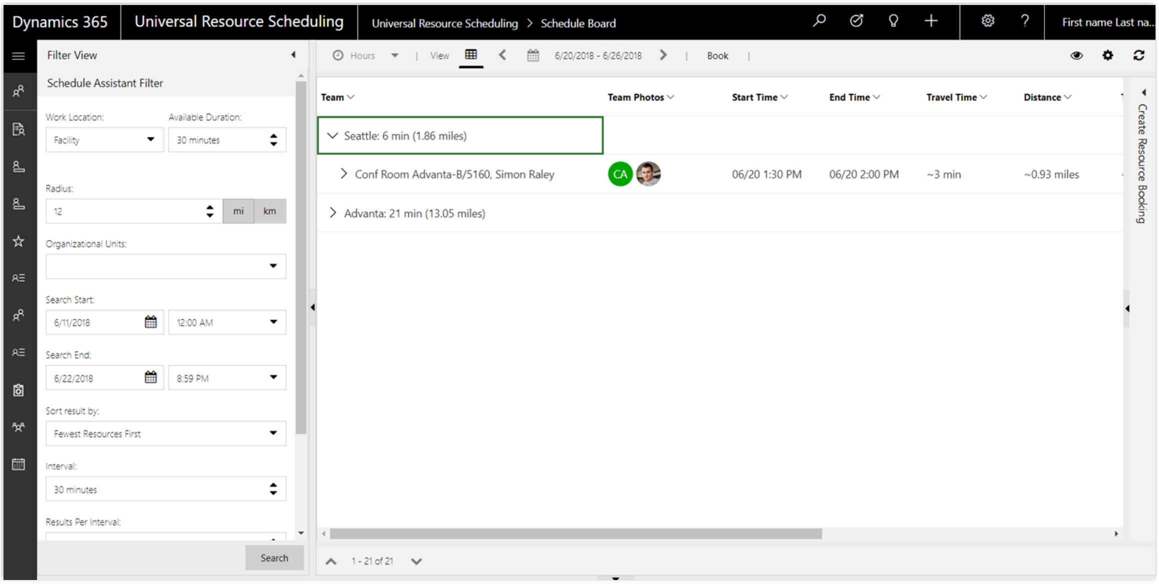
Resource pool scenarios

Facility scheduling

Provide service at service provider's location instead of customer's location.

- Sample scenarios
  - Reserve physical space
    - Reserve a room for an event or party
    - Reserve a room for an exercise class
    - Reserve a bay at mechanic shop
    - Reserve a boat
  - Reserve an appointment with a person at a facility
    - Fix laptop at Microsoft retail store

- Wealth management consultation at bank
- Tutor in a focus room



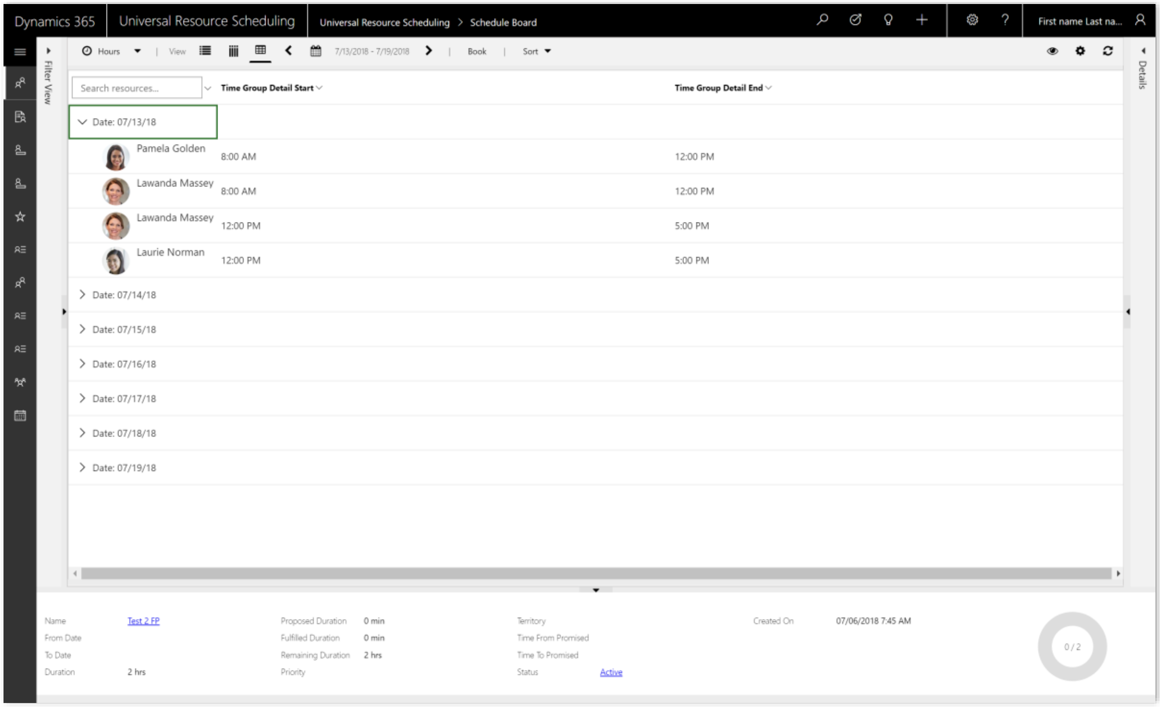
Scheduling at a facility

Fulfillment preferences

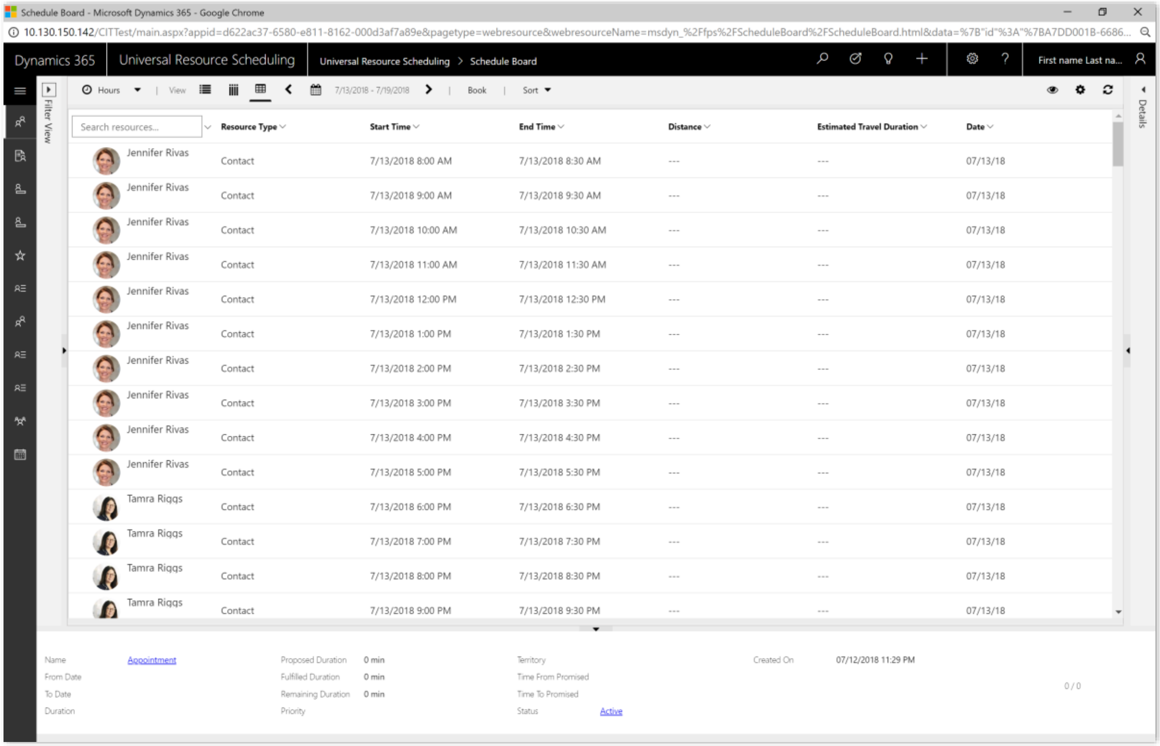
Simplify the experience for your schedulers and customers while decreasing the amount of time it takes to book appointments.

- **Preset intervals** - Offer appointments every 15 minutes, on the half hour, the hour, or choose your own granularity.
  - Doctor appointments
  - Wealth management consultations
  - Scheduled phone calls
- **Time groups** - Present windows of availability to schedulers such as 9 to 12, 12 to 3, and 3 to 6. * Air conditioning repair * Doctor appointments
- **Hide specific time** - Hide extra data that is not relevant if scheduling to a window.

- **Display only the top results** - Declutter scheduling screen by limiting results you deem redundant per time group, or per interval.



Schedule Assistant displaying results broken into windows



Schedule Assistant displaying results on the hour as part of interval scheduling

Capacity scheduling

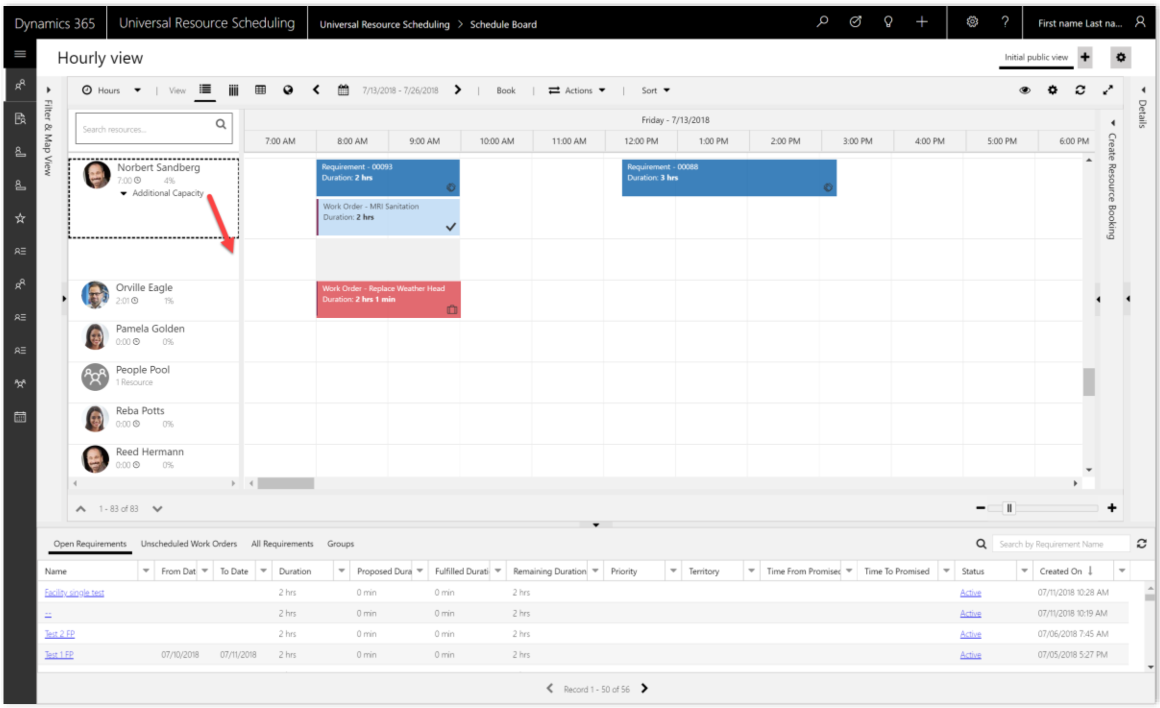
Resource requirements can now specify how much effort a requirement needs from a resource. When scheduling, the Schedule Assistant will look at a resource's defined capacity on its work hours to check if the necessary effort is available. A resource's capacity can vary even within a day.

Capacity scheduling is exceptionally useful when booking a facility. By way of example, a van may require twice the space as a standard car. You can now create a facility with a certain capacity, but when booking time to work on a van, it consumes the capacity of the facility as if you were booking two cars or six motorcycles.

The Schedule Board will also offer a visual indicator when a resource has additional capacity even though there is a booking at a given time.

- Sample use cases
  - Staff augmentation where resources are unnamed.
  - Efficient resources.
    - Person can fix two bikes in the time a typical person can fix one.
  - Physical space.
    - One workspace can fit two cars or one van.

- Create a "class" as a resource, and allow up to 10 customers to be booked to the class. > Resources that perform onsite work cannot have a capacity of more than one.



Schedule Board showing a resource with additional capacity row expanded

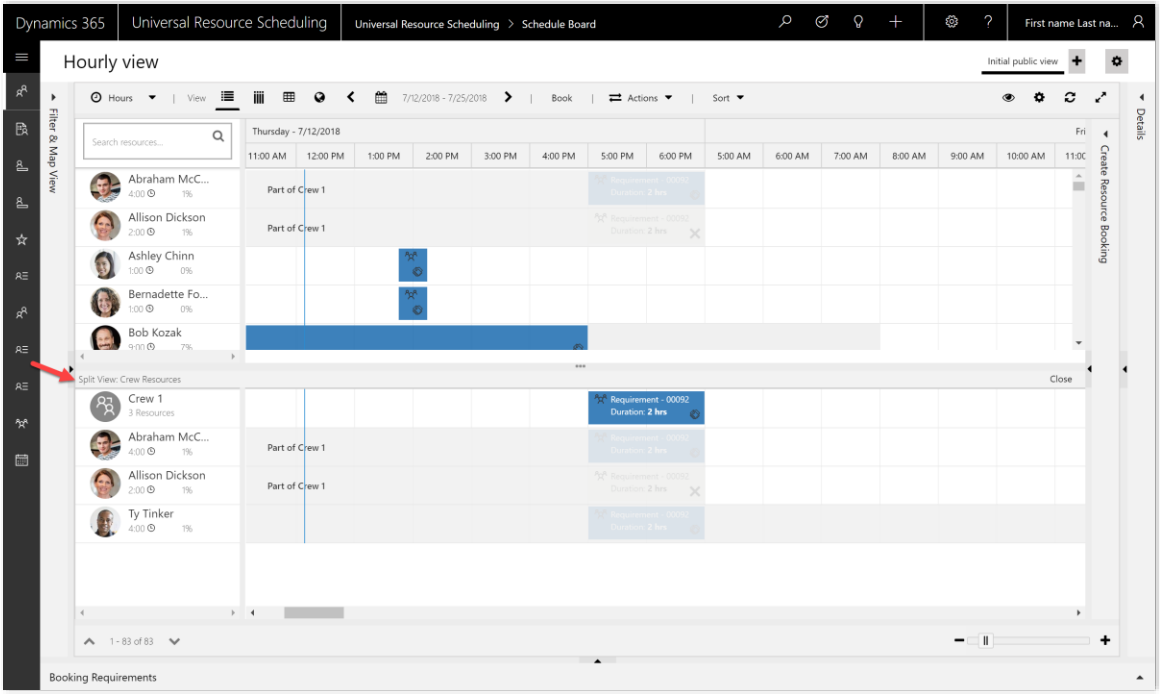
Schedule board split view

There are scenarios where you may want to drill into information on the schedule board without needing to load new screens or lose context of where you are:

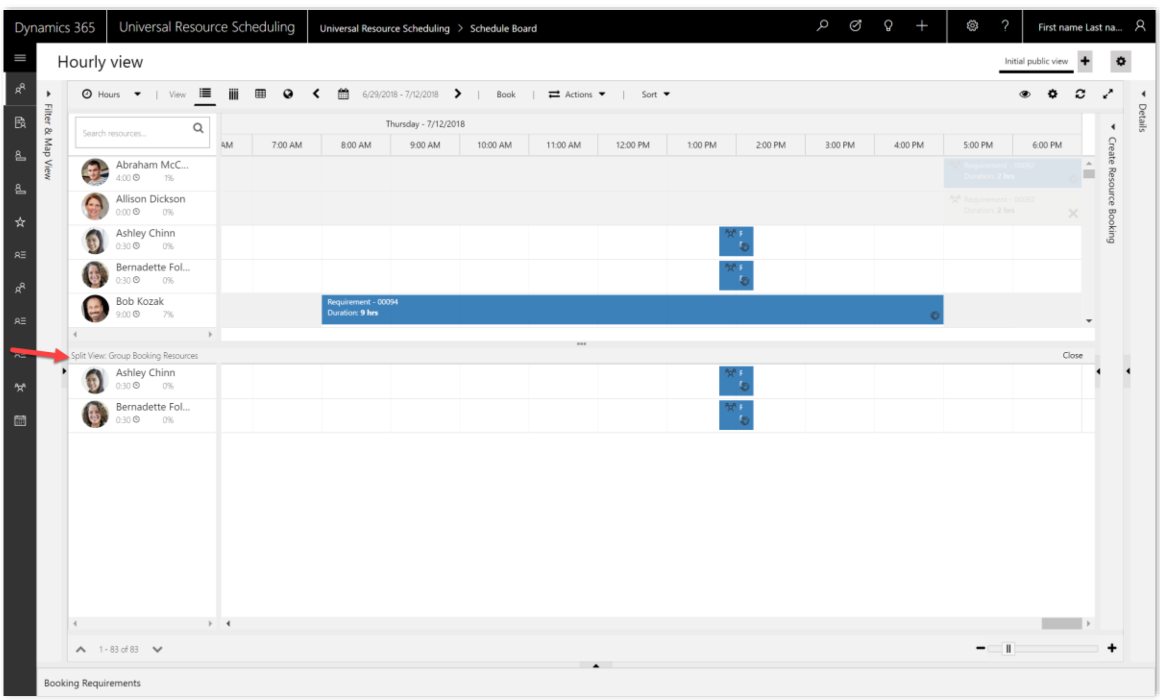
- Drill into a specific crew and manage the crew on its own.
- Local resource managers may want to focus on a specific pool of resources as they assign bookings at a more granular level.
- A dispatcher may quickly want to see all the resources assigned to a requirement group at once, without losing context of where they are on the board.

All three of these scenarios are covered with the schedule board split view.

Split the schedule board in two. The bottom half can be dedicated to display a crew and all of its members, a pool and its members, or a set of resources that are assigned to work on the same job.



Schedule board with crew in split schedule board



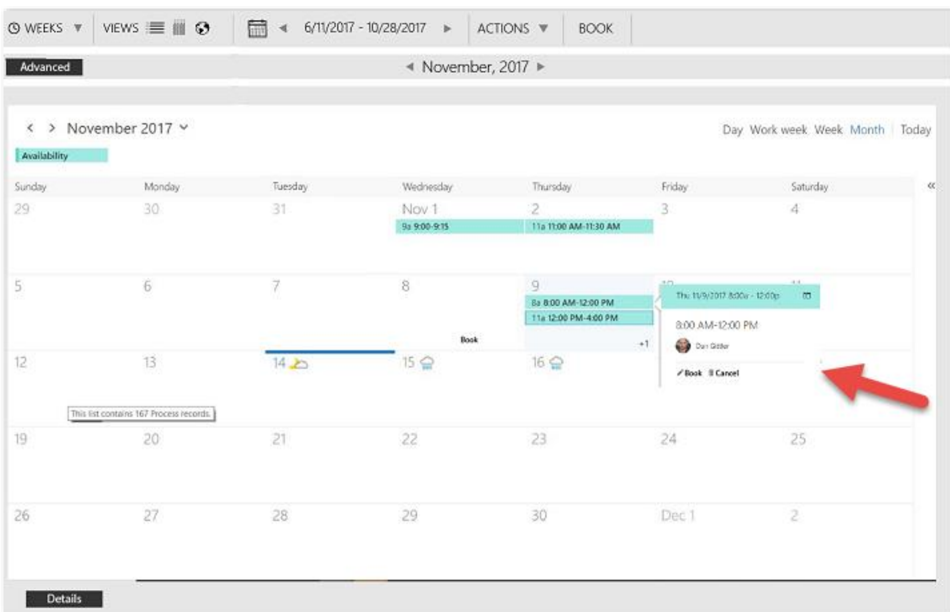
Split schedule board with resources working on same requirement group

Extensible resource availability

As part of the Schedule Assistant search, customers can now decide if they want to override the availability of a resource before the search results are returned. For example, customers with different business closures for different organizational units can query a table that contains organizational units and the days they are closed, subsequently removing resource availability during the hours of business closure.

In-form scheduling

Today we have a compelling capability around searching for and creating bookings with a flexible UI. However, in some cases, the full power of resource scheduling may not be needed for a casual user who is not a dispatcher or resource manager. A customer service representative on the phone with a customer may simply want a list of the top three bookings to choose from, while remaining in the context of their flow, instead of having to pop out a schedule board. In-form scheduling includes a lightweight widget where the user can select from the top options in a simple list or calendar view.

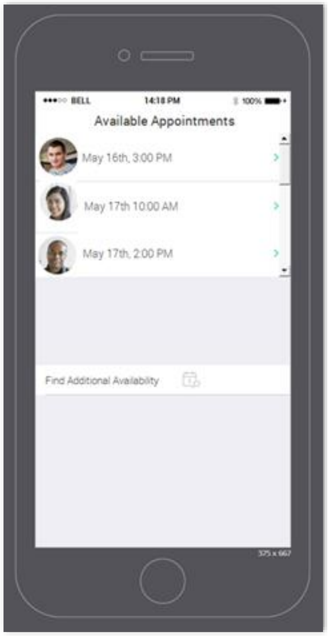


Wireframe of calendar in-form booking control using OWA UI

PowerApps sample app

We are providing an out-of-the-box PowerApps sample app for URS that can interact with the resource availability search API and pass back information to create a booking.

Customers are looking to build all sorts of scheduling apps such as customer self-scheduling apps and "greeter apps." Offering a URS PowerApps sample app will allow Dynamics 365 CE customers to remain in the Dynamics ecosystem while using URS as their scheduling solution, instead of having to explore other scheduling options. It allows a way to query real-time availability based on all the customers' requirements and then pass back in the booking information when a booking is created. This sample app is targeted toward our customers who want to schedule resources with an interface outside of Dynamics 365 CE.



Self-service scheduling APIs

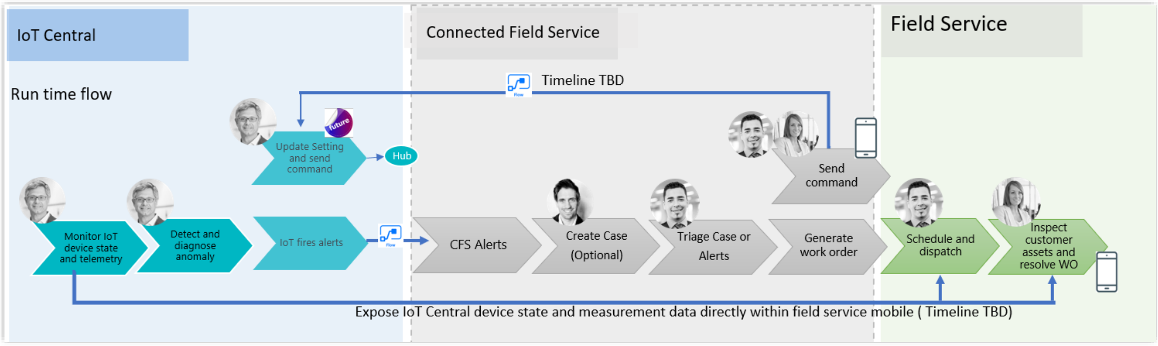
Universal Resource Scheduling's self-service scheduling APIs ultimately allow organizations to embed a scheduling widget on their own web application, enabling their customers to search for availability and book appointments. While we have goals of building the widget itself, the primary focus is to unleash the APIs to our partner and customer ecosystems, allowing them to build their own visuals.

URS customer-driven product enhancements

- Additional extensibility on the schedule board to support a simpler resource request flow for the Project Service application.
- When inserting a booking between two bookings or reassigning a booking to another resource, the travel time of all associated bookings will be recalculated properly.
- Multi-resource scheduling, crew scheduling, and pool scheduling are major new feature sets being introduced. We will address market feedback and scenario completion after these features ship.

CFS - Integration with IoT Central

For the first phase of integration, the focus of the integration solution will be through Microsoft Flow. This is a one-way communication from IoT Central to Connected Field Service. With IoT Central monitoring remote devices, any measurements that exceed thresholds defined in IoT Central will trigger an action to fire an alert in CFS. Field service managers can group these alerts by criteria such as customer asset and incident type.



For the October '18 release, technicians can be equipped with and act on insight from IoT devices when on site, with a few options depending on the state of IoT Central.

- Embed IoT Central device state and measurement visuals directly within the Field Service mobile application.
- Store telemetry data from IoT Central in an Azure blob and enable an embedded Power BI visualizing the data.
- Allow technicians to send commands from the Field Service mobile application back to IoT Central.

Enable more objectives

- Support preferred resources as an objective: Businesses will be able to define preferred resources for requirements and the optimizer will assign bookings to preferred resources first while meeting other constraints and objectives.
- Support best/least matching skills as an objective: Different business have different goals for using the skills of resources. With best-matching skills, businesses can better meet SLA and customer satisfaction, while balancing cost and efficiency with lower matching skills.

Single resource optimization

Single resource optimization provides a quick and simple way to re-optimize a selected resource to ensure that resource still has an optimal route after some schedule change happens during the day. For example, a resource may have overlapping bookings after getting assigned an emergency work order in the middle of the day or may not be able to make it in time for a booking due to traffic.

What-if analysis statistics

RSO administrators can leverage simulation runs to adjust optimization scope (include/exclude more resources), objectives (re-order rankings of objectives), and other parameters to understand what optimization results look like before locking down the recurring schedule. Additionally, with an analytic statistic, administrators can better evaluate optimization and compare simulation runs versus existing bookings.

Overview of Dynamics 365 for Project Service October '18 release

The October '18 release of Project Service focuses on customer-driven enhancements, with practical and tactical functional and usability improvements. Among the enhancements:

- Adjustments to approved time, expense, and journal lines.
- Support for time unit on role price line.
- Ability to make copies of price lists by adding a markup percentage.
- Configurable unit of time for project work estimation to match org unit settings.

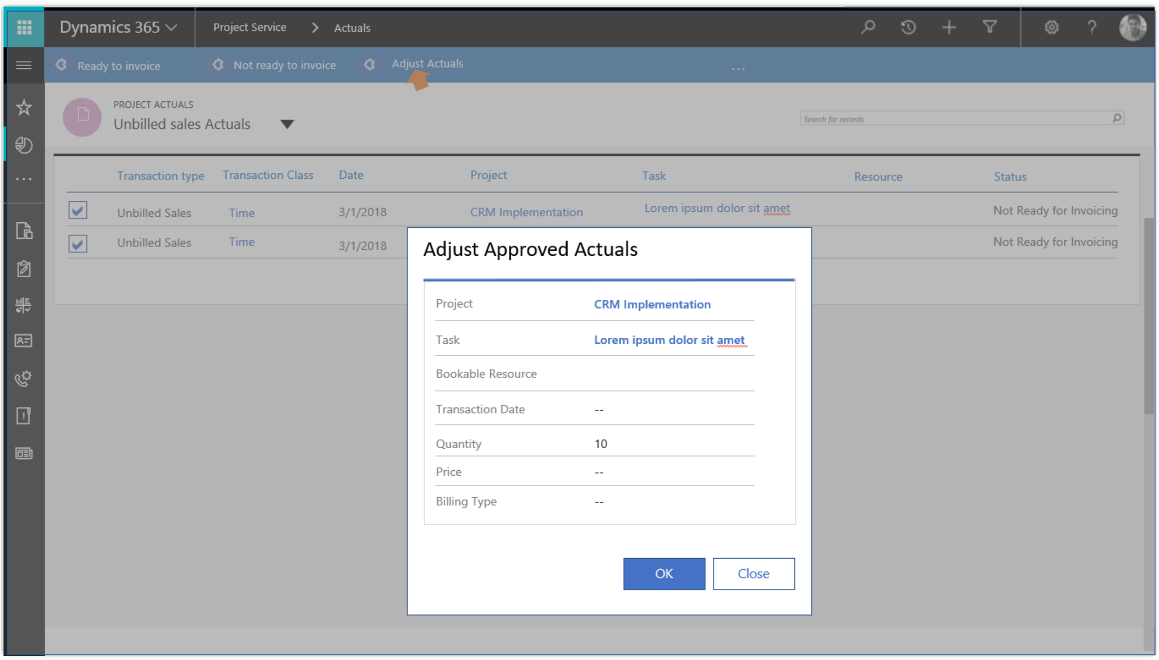
Summary of what's new in Dynamics 365 for Project Service

Feature	Release type	Target release month
Adjustments to approved time, expense, and journal lines	General Availability	November 2018
Unit-aware expense category pricing for setup, estimation, and actuals	General Availability	November 2018
Use transaction filters to review invoicing backlog when creating invoices	General Availability	November 2018
Date effectivity validation on price lists	General Availability	November 2018
Resourcing unit currency on role price lines for cost	General Availability	November 2018
Support for multiple time units on a single price list	General Availability	November 2018
Ability to make copies of price list by adding a markup percentage	General Availability	November 2018
Resolution of multi-currency cost price list on projects	General Availability	November 2018

Adjustments to approved time, expense, and journal lines

This feature will give the much-needed ability for project administrators to make changes to approved time and expense entries. Most project-based companies set up temporary codes for projects, tasks, and other attributes like work categories and have consultants log time against these interim references until the permanent codes are set up in the system.

It's also common to reclassify time on a task to another task on the same project or on a different project for the same customer. In a majority of such cases, changing of this reference data will also impact financial postings in the ERP or accounting system. This feature will allow these updates to approved actuals and handle the updates with a historical trail.



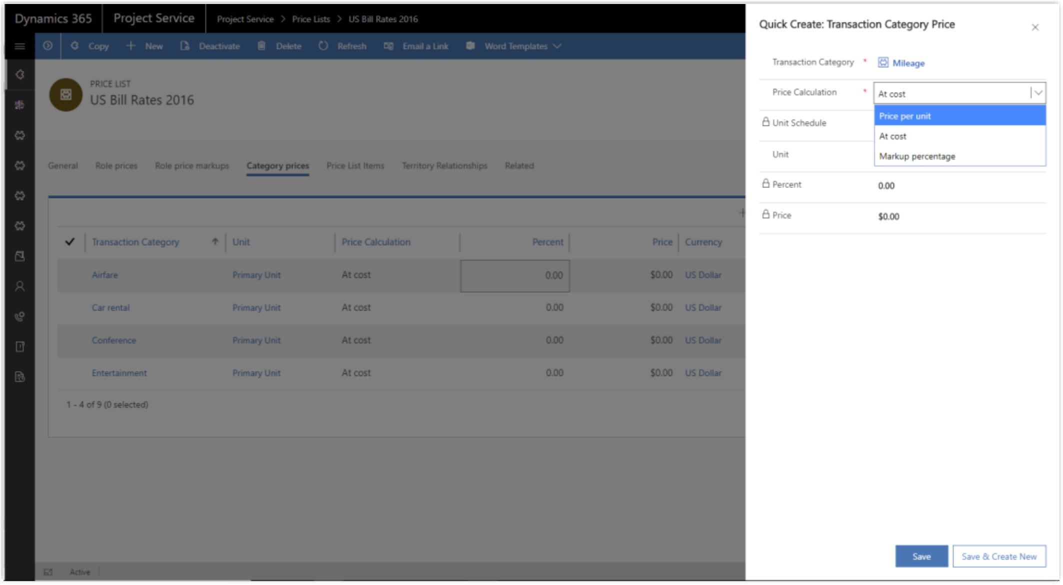
Unit-aware expense category pricing for setup, estimation, and actuals

With this feature, Project Service will support a unit–based pricing method for expense categories. This will enable scenarios such as the following:

1. Mileage reporting on projects by traveling consultants.

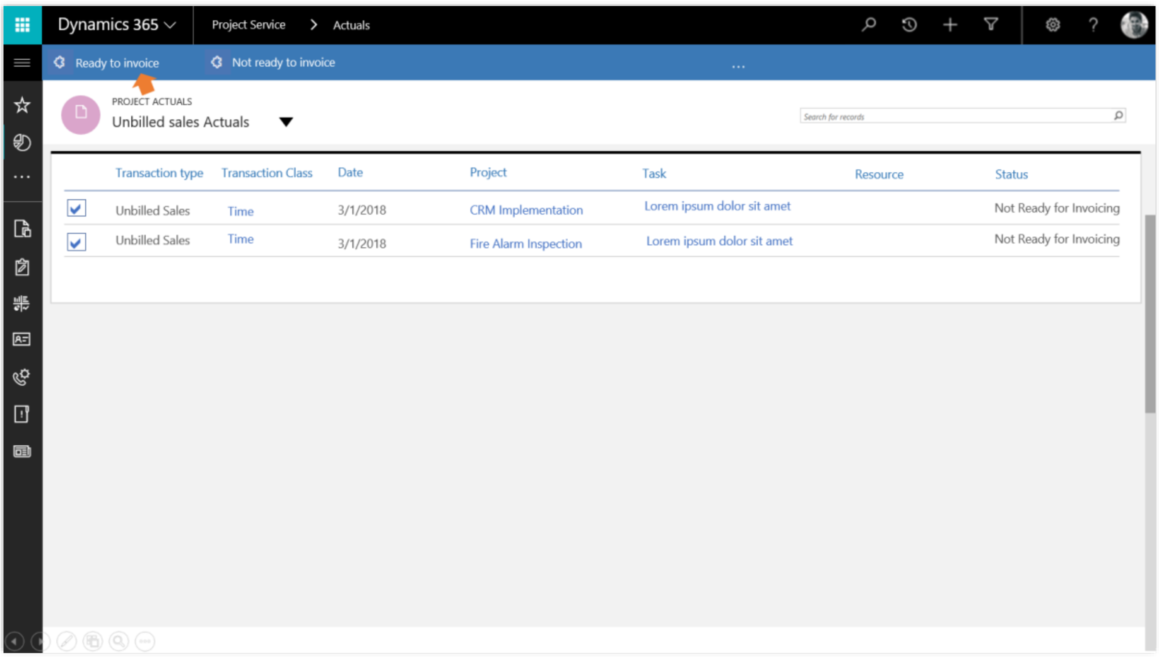
2. Pricing by project deliverables based on units of work. A number of industry verticals like accounting firms (where tax returns are priced by unit) and BPO firms (where support calls are priced by units of calls processed) will be able to leverage this capability to estimate and track projects costs and revenue closer to their business model.

3. Providing a way to price and cost for subcontracted deliverables as delivery units. When subcontracted work doesn't need to be tracked at the granularity of time or expenses incurred by the vendor but rather in terms of units of output completed and delivered by the vendor, the ability to model the vendor's delivery units as a category of expense that can be priced by unit will be a key capability.



Use transaction filters to review invoicing backlog when creating invoices

Project Service creates invoices from all unbilled sales actuals that were recorded on a project. This feature will introduce a view where you can filter actuals using the native XRM filter capabilities and mark the transactions that are ready for invoicing. This will provide better control for the project managers on what gets invoiced to the customer for each period.



Date effectivity validation on price lists

This feature ensures that Project Service users avoid errors in price defaulting arising from having more than one price list effective for a certain date. As Project Service customers are aware, the product allows for multiple project price lists to be associated to quotes, project contracts, and organizational units. This is to allow for inflationary pricing changes represented by price lists with different date effectivities.

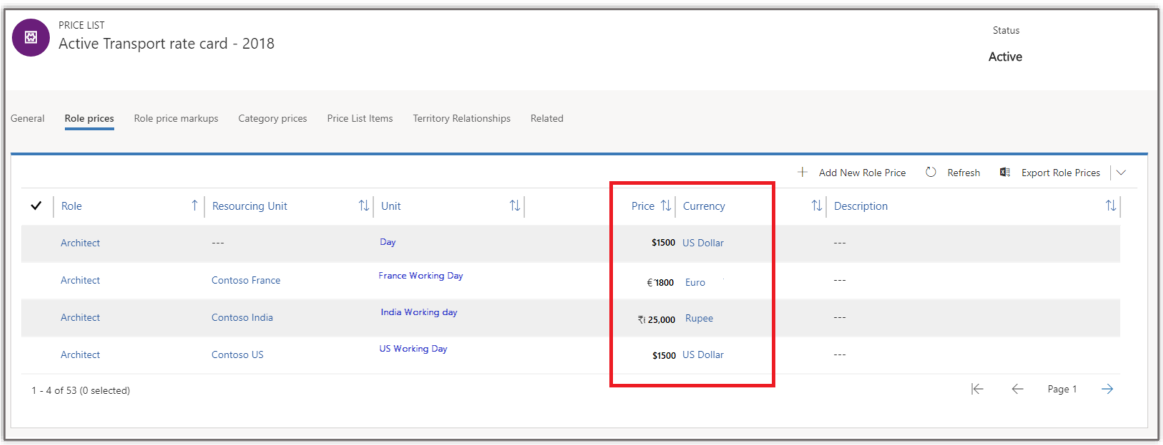
With this feature, the system will validate the price list setup to ensure no overlapping date effectivities given a single context such as a project or a contract. Also, the system will ensure that when an estimate on a quote or contract spans multiple price periods, the system is able to correctly price the work.

Resourcing unit currency on role price lines for cost

Project Service allows only one currency per price list, which is specified on the price list header. The price list line for resource pricing has the same currency specified on the price list header. However, for globally operating project service companies that have centralized pricing across all of their divisions across countries, this can necessitate a data-intensive setup where they'll need to set up a price list for each distinct currency that they sell or incur costs in.

With this feature, Project Service will allow for a line-level currency for resource prices that differs from the price list header currency. Currency on the price list header will be used as a default on the resource price lines. This way, large global firms that would like more centralized pricing setup may work with one global price list that specifies resource prices in many currencies. This could also enable scenarios where prices managed by each resourcing unit come together as one master price list.

Using a single currency per price list will still function, which benefits companies that allow for more decentralized pricing and that track exchange prices for resources. This can be customized so that the resource prices on a price list follow the currency of the price list header.



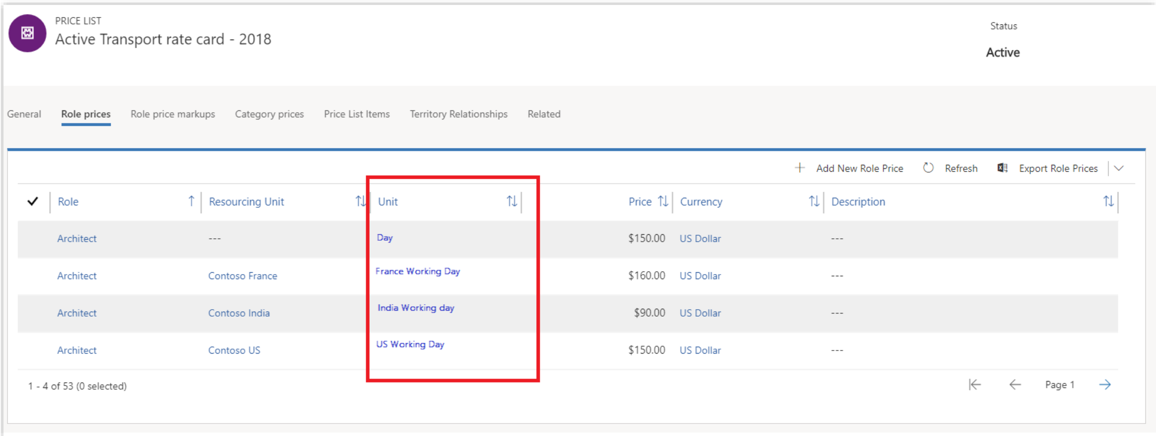
Price list for cost with price list lines in multiple currencies

Support for multiple time units on a single price list

Project Service supports pricing resource time. Users may choose to set up prices in hours, days, or any other unit of time. One current limitation is that the unit of time is decided on the header of the price list, and can't be changed on individual price setup lines for resource time.

With this update, each price list will allow you to specify prices for multiple time units. This is particularly useful for companies that operate across geographies with different labor laws and practices.

For example: When expressing rates for a "working day," each division of a multi-national project service company might have its own definition of a working day. Its India division might work 8-hour days, while its Scotland division might work 7.5-hour days. With this feature, companies will be able to set up prices per day using the day unit that is specific to each division.



Cost rates for multiple time units on Price List

Ability to make copies of price lists by adding a markup percentage

Project Service allows you to make copies of price lists for ease of data creation and maintenance. You're currently able to make copies of price lists in the same currency and time unit, or convert a price list in one currency and time unit to another by making a copy, using a different currency or time unit.

In these scenarios, the new price list is created by converting the currency and/or the time unit on the source to the currency and/or time unit specified for the target. This feature goes one step further by allowing users to specify a markup percentage when creating a new price list from an old one. This will be useful when creating new price lists for a future period by applying inflationary price changes.

Resolution of multi-currency cost price list on projects

Project Service resolves the price list for cost rates on projects by matching the currency of the organizational unit that owns the project to the price list currency. In the case where a price list may have prices in multiple currencies, it's expected that there would be one master price list with cost rate lines in multiple currencies, and that this price list would be used by all projects globally.

In that situation, resolving a cost price list for a project using the currency on the header of the price list would not work. With this feature, it will be configurable to set up the default resolution of the project cost price list. The options available would be to match the project's cost currency with the header of the price list as it works today or to use the globally managed price list regardless of its header currency.

Microsoft Social Engagement

Overview of Microsoft Social Engagement October '18 release

Microsoft Social Engagement helps you harness the power of the web (social, search, and browse) to achieve business results. By putting intelligence from the web at the fingertips of sales teams, customer service agents, brand marketers, and across your organization, your employees can gather insights, meet customers and prospects on the channel of their choice, and build a trusted social presence.

Give marketers and PR teams the tools to measure and manage brand reputation. Empower service agents to solve problems effectively on any channel. Help sales teams forge better relationships by sourcing new leads and engaging them with relevant content.

The October '18 release will continue to build on these strengths by adding new capabilities. The key themes for this release are:

- **Quick setup and instant insights**: For the first time, Social Engagement will guide users of newly created solutions to success. It's easy to access and set up and lets you start within minutes. Users will get instant value with intelligent insights. This is further improved by fast provisioning to get you directly into your fresh solution.
- **Insights from the web**: Get accurate and actionable insights on your brand, products, competition, and industry from Microsoft's proprietary web search and browse data sources. All insights are aggregated and anonymized to comply with Microsoft privacy policies.
- **Enhanced user guidance**: Get the most value out of Social Engagement with an enhanced user guidance experience that will help you quickly learn how to get around and use the app effectively.
- **Additional languages**: Microsoft Social Engagement will add support for several additional languages, significantly expanding our availability for customers in new markets and regions. Additional languages will be added for both the UI as well as for data acquisition.
- **Social Insights in Dynamics 365 for Marketing**: Get contextual social insights from Microsoft Social Engagement in your Dynamics 365 for Marketing app. Track your campaigns and events and find out how they are performing on social media. Analyze your brand's reputation with customizable dashboards. Configuring and getting started with Social Insights in Dynamics 365 for Marketing will be a simple and fast process.

Summary of what's new in Microsoft Social Engagement

Feature	Release type	Target release month
Quick setup and instant insights	General Availability	October 2018
Social Insights in Dynamics 365 for Marketing	General Availability	October 2018
Additional languages	General Availability	December 2018

Quick setup and instant insights in Social Engagement

Social media has become an intrinsic part of every successful marketing, customer service, and community management organization. Monitoring, measuring, and managing how a brand is perceived on social media is critical to the success of that brand. Starting to care professionally about the social presence of your brand can be challenging for companies. A lot of professional tools depend on consulting and training to get started.

The upcoming changes to Microsoft Social Engagement will address that. Accessing and getting started will be quick and easy with:

- **Self-service experience**: Whether you want to give our app a try or buy it, a simple sign-up experience directly from our public website gives you a frictionless self-service experience to get started within minutes.
- **Quick setup**: The simple first-run experience guides you to set up search topics for your brand with just a few clicks.
- **Instant insights**: Historical data is acquired and loaded for your brands right after the quick setup, giving you instant insights for your brand from social media. You can then immediately start exploring with our interactive analytics.

Social Insights in Dynamics 365 for Marketing

Social Insights are a set of widgets that show data from Social Engagement in other Dynamics 365 apps. In October '18, Social Insights will be available to track campaigns in Dynamics 365 for Marketing.

For more details about this feature, see Social Listening for your campaigns (Dynamics 365 for Marketing)

Additional languages

Microsoft Social Engagement is expanding with listening capabilities into new markets by adding more languages for data acquisition, sentiment analysis, and custom tags:

- Bahasa
- Czech
- Hindi
- Hungarian
- Korean

The Social Engagement UI will be localized in additional languages:

- Bahasa
- Bosnian
- Croatian
- Czech
- Hindi
- Hungarian
- Korean
- Serbian
- Slovenian
- Thai

Finance and Operations

Overview of Dynamics 365 for Finance and Operations October '18 release

This topic describes the theme areas for the October '18 release of Finance and Operations.

Focus on fundamentals

The October '18 release continues to expand supportability efforts for the community. This allows the community to build extensible solutions integrated with the Finance and Operations application. Microsoft manages the continuous updates of the platform and financial reporting with no costly upgrades required. Customers can opt for a fully data-resident online Finance and Operations subscription. All customer data and code will be contained in the data region of their choice. Data residency will be made available in Europe and then expanded to other regions.

- **Improving the business user experience.** Business users see fundamental day-to-day productivity gains by being able to save and share optimized views of data, group data based on a list of values, filter by date, and allow for Excel-like filtering by column headers. Business users want control of their experience. Personalization capabilities empower them to add/remove columns from a grid and hide any field to simplify and increase the speed of data entry.
- **Increasing productivity, control, and auditability.** Customers increase the speed and accuracy of their work with data entry enhancements. Additional controls for new master data provide companies insight into and tracking of their key business processes. Customers gain improved reporting, auditability, and drill-back with additional subledger data translated in multiple currencies.
- **Extending global coverage.** Global or regional customers with offices in United Arab Emirates (UAE) and Russia can start using Finance and Operations; this release supports regulatory requirements for these countries.

  [!NOTE] Russia localization is available for on-premises deployments only. The October '18 release covers several major Russia localization areas. The remaining Russia localization areas are targeted for general availability by the end of calendar year 2018. The plan for Russia Retail localization and Russian Payroll is not available yet. In the October '18 release, we also make several enhancements in our global electronic reporting (GER) and global tax engines (GTE) to provide a better regulatory feature configurability experience for power users.

Intelligence and insights

Bringing intelligence and insights to the forefront for business users increases efficiencies and productivity for the organization. Microsoft has launched several new experiences that can stand alone or work better together with Finance and Operations.

Better together

Microsoft is improving the digital workspace by streamlining the power and experiences of business applications, allowing business users to be more efficient while navigating across applications.

- **Sales and service integrations.** Seamless integrations leverage the CDS data integrator support scenarios for Customer Service and Finance and Operations. These integrations continue to bring new experiences such as project-based travel expenses, work breakdown structure support to manage planning, and billing to support project managers. Field technicians using Field Service have insight to the inventory information stored in Finance and Operations, allowing them to update inventory levels and complete material transfer. In addition, companies installing or servicing sold goods will benefit from visibility to the full sales and service process.
- **Dynamics 365 for Talent integration.** The CDS data integrator provides two-way integration for employees who are using Finance and Operations and Dynamics 365 for Talent. Employees will experience a seamless transition as data is shared between these systems.
- **Regulatory configuration service.** The regulatory configuration tool (known as Electronic Reporting) is now an independent service. This service allows partners and customers using multiple versions of Finance and Operations and earlier Microsoft Dynamics AX versions (such as AX 2012 and AX 2009, for India only) to configure regulatory features only once and use one common service for various versions. The regulatory configuration service targets a no-code programming approach, allowing power users to configure frequently changed legal requirements for regulatory reports, e-invoices, payment formats, and tax rules, rather than writing code in multiple applications. Regulatory configuration service is the first component of regulatory services, providing regulatory functionality that can be integrated with any business application. This service allows developers building applications to focus on their core functionality rather than worrying about meeting the increasing number of legal requirements around the globe.

Summary of what's new in Dynamics 365 for Finance and Operations

This topic lists the features planned for release in Microsoft for Finance and Operations between October 2018 and March 2019.

Planned financial features

Feature	Release type	Target release month
Dual currency	General Availability	October 2018
View settlement transactions	General Availability	October 2018
Global number sequences	General Availability	October 2018

Feature	Release type	Target release month
Vendor and customer approvals for specific fields	General Availability	October 2018
Data entry dimension values	General Availability	October 2018
Consistent validation actions	General Availability	October 2018
IBAN number validation	General Availability	October 2018
Change cash discounts	General Availability	October 2018
Automatic ledger settlements	General Availability	October 2018
Reverse journal posting	General Availability	October 2018
On-hand inventory report performance	General Availability	October 2018
Simplification through configurable templates	General Availability	October 2018
Enterprise credit management	General Availability	Undetermined
Revenue recognition	General Availability	Undetermined

Planned operations features

Feature	Release type	Target release month
Master planning performance improvements	General Availability	October 2018
Consolidation of planned orders during parallel firming	General Availability	October 2018
Sealed bidding	General Availability	October 2018
Unit of measure	General Availability	October 2018
Public sector enhancements	General Availability	October 2018

Globalization

Feature	Release type	Target release month
Russian localization	General Availability	October 2018
Globalization – enhanced configurability	General Availability	October 2018

Feature	Release type	Target release month
Regulatory Services, Configuration service	General Availability	October 2018

Planned platform updates

Feature	Release type	Target release month
Usability and productivity updates	General Availability	October 2018
Personalization improvements	General Availability	October 2018
Additional demo data	General Availability	October 2018
Data resident subscriptions	General Availability	October 2018
Supportability rules	General Availability	October 2018
Test automation support	General Availability	October 2018
Troubleshooting for the document routing agent	General Availability	October 2018
Upgrade automation	General Availability	October 2018
On-premises deployment	General Availability	October 2018
Manage batch jobs	General Availability	October 2018

Integration updates

Feature	Release type	Target release month
Integration with Field Service: Inventory and Projects	General Availability	October 2018
Extend analytical workspaces by mashing up external data with Power BI	General Availability	October 2018

Analytics features

Feature	Release type	Target release month
BYOD	Public preview	October 2018
Edit analytical workspaces	General Availability	October 2018

Feature	Release type	Target release month
Pin Power BI dashboards to workspaces	General Availability	October 2018
Real-time embedded Power BI Reports	General Availability	October 2018

Lifecycle Services updates

Feature	Release type	Target release month
Dynamics Translation Service API	Public preview	October 2018

Dual currency

The reporting currency will be repurposed into a true second accounting currency. From a general ledger perspective, the reporting currency will continue to be calculated for every transaction posted to a general ledger. Some general ledger processes will be enhanced, and a new journal will be added to post transactions in only the reporting currency. For various subledgers, such as fixed assets, there will be larger changes. For fixed assets, we will start to maintain all transactions in the subledger for the reporting currency. When running depreciation, it will depreciate the reporting currency amounts using the depreciation methods, just as it does the accounting currency. Other subledger modules impacted will be Accounts payable, Accounts receivable, and Cash management.

Productivity to view settlement transactions

Improve the viewing of settlements by showing all related transactions for a settlement. Maintain multiple tabs so users can see the original context of the transaction, the settled transactions, and the related vouchers on a single form. This enhancement will alleviate the pain of users needing to have multiple forms open to see the correlated information.

Global number sequences

Global number sequences for customers and customer groups allow business users to copy this data from one legal entity to another. When the copy function is complete, the same customer number and customer information will be shared in both legal entities. This improves usability for inter-company scenarios. This functionality is also available for vendor and vendor groups.

Vendor or customer approvals for specific fields

Enable approval of customers and vendors when specific fields are edited. You will be able to select from a list of fields that can be approved. Once the field is edited, you can submit the changes to workflow. When the changes are approved, they will be applied to the customer or vendor record.

Ease of data entry for dimension values

When a dimension has a backing entity such as customer or vendor, the dimension value will default to the value entered in the associated form. For example, the customer dimension would be automatically set to the customer value used when a customer is created. New options are available to enable one or more dimensions to be defaulted. For example, a business unit can be defaulted when the cost center is entered.

Consistent validation actions

The validation for journals will be improved to check for the exact same validations that are done at time of posting.

IBAN number validation

IBAN numbers will be validated to ensure that the bank account number in the IBAN number matches the account number on the bank account form.

Change cash discounts

When editing a due date or base date in the customer or vendor transactions form, the user can be prompted to update the discount date. The due date and base date will be added in the transaction form and there will be a parameter that enables the prompt for a discount date change when the base date or due date is modified.

Automatic ledger settlements

Ledger settlement rules can be set up to automatically settle ledger transactions based on user criteria. Batch processing will be added so that the task can be run periodically.

Reverse journal posting

Reversals are improved to allow the reversal of multiple general journal lines or an entire general journal. Reversal from the voucher transaction form allows reversal of a limited number of subledger journal entries. Reversals are also allowed from the accounting source explorer.

On-hand inventory report performance

Customers with large volumes of products and transactions find it a challenge to ensure prompt on-hand inventory information, given that the current design requires significant real-time processing. Refactoring the approach to calculating and reporting on-hand inventory allows for a far more responsive experience.

Simplification through configurable templates

Customers will save time and money by using configurable customer invoice and other external report formats. The formats provide options to print documents to preprinted forms as well as plain paper. Using the configurable templates will either eliminate or minimize the need to modify invoices and customer statements in X++ code or in SQL Server Reporting Services (SSRS). In the October '18 release, the configurable template is available for free text invoices only. A template can be created from an existing free text invoice, or a new template can be created and used when creating new invoices. In later updates we will extend the number of configurable templates for customer invoices, statements, and other external documents.

Public sector enhancements

New capabilities for Public Sector are being added for accounting and finance professionals in the October '18 release, such as enhanced reporting and inquiries, new budgeting functionality, encumbrance enhancements, vendor collaboration improvements, vendor 1099 updates, and distribution of interest accrued on cash balances.

Enterprise credit management

Enterprise credit management provides capabilities to automate the credit control management process for accounting and finance professionals.

Enterprise credit management will proactively suggest credit control activities, thereby improving cashflow, reducing bad debts, and providing new account risk management.

The capabilities will include:

- Management of risk scores
- System-suggested credit limits
- Configurable blocking rules
- Automation of credit cases
- Dynamic release of credit holds
- Credit limit management
- Tracking historical credit limits

Revenue recognition

Revenue recognition management provides automation to help accounting and finance professionals comply with International Financial Reporting Standard (IFRS) 15 and Accounting Standards Codification (ASC) 606.

New capabilities will include support for product bundles and kits such as:

- Software and maintenance
- Software and services
- Software
- Hardware and service

These capabilities will handle deferred revenue, recognition schedules, subscriptions and renewals, and forecasting and reporting.

General enhancements in operations functionality

This release includes improvements to the warehouse area, including:

- Identifying and preventing data inconsistencies
- Performance improvements
- Enhancements of various flows
- Reviews of possible configurations that block non-optimal combinations
- Activities that focus on consistent functionality

Additionally, we have improved the inventory updates used for managing inventory on hand.

Master planning performance improvements

The performance and predictability of master planning will be improved through multiple, incremental enhancements.

Consolidation of planned orders during parallel firming

Master planning will be enhanced to support consolidation of planned orders—for example, by a vendor—when the automatic firming of orders is configured to run in parallel using multiple threads.

Sealed bidding

The request for quotation capabilities will be enhanced to support sealed bidding. A vendor can enter and submit a bid including .pdf attachments via a dedicated form in vendor collaborating interface. The bid will not be visible in the context of the RFQ that the procurement personnel have access to. The bid is stored encrypted. Only the contact person registered as a vendor contact and having the required role permissions can access the bid before it is unsealed. The procurement personnel can unseal the bids after the expiration date, and from that point can see the vendor's bid in context of the RFQ. Any user action that reads or writes in the bid before the expiration date will be logged for audit purposes and that information will be available to the vendor and also to the procurement personnel when the bid is unsealed.

Unit of measure conversion for variant

Uptake throughout the warehouse management system, this functionality will provide support for configuring unique physical dimensions and unit of measure (UOM) conversions at the product variant level. Currently, only the few scenarios are supported.

Russian localization

Microsoft Dynamics 365 for Finance and Operations now supports mandatory regulatory requirements in Russia (for on-premises deployment only). The October '18 release of the Russian localization covers the following functional areas: accounts payable/accounts receivable, advanced holders, bank and cash, fixed assets, general ledger, financial reporting, electronic reporting, inventory, tax registers, addresses/FIAS, and VAT.

The remaining Russian localization functionalities are targeted for general availability by the end of calendar year 2018, including: cash flow management, alcohol sales declaration, inventory management enhancements: bailment, goods in transit, optional posting of transfer orders, inventory owner, third-party miscellaneous charges, and tax declarations in electronic format.

The plan for Russia Retail localization and Russian Payroll is not available yet.

Globalization – enhanced configurability

Configurability of features lets partners and customers do extensions and customizations without coding. We continue to extend both the depth and the breadth of configurability and added the following new capabilities in this area:

- Static validations and dynamic performance rules for configuration. This feature prevents performance degradation when partners or customers customize configurations and guide users while doing such customizations.
- Automatic comparison of electronic reporting format executions with baselines defined in task guides, which provides us and our partners and customers with automatic test capabilities. These tests focus on business users rather than engineers.

- Relative paths in electronic reporting formulas. This feature allows quick remapping of the format if you need to switch to another data entity or XML node with a similar structure.
- Out-of-the-box configurable free text invoice templates that customers and partners around the globe can easily modify to meet their local requirements.
- Separated model mapping from taxable documents, so that one set of taxable documents can be shared by different Finance and Operations versions.
- Enable configuring tax currency on the tax component in a tax document to help customers with multiple branches in different countries.
- Linear equations solver for tax calculation, so that users must create tax calculation formulas with linear equations. The result will be performance improvements in tax calculation.
- Enable configuring the visibility of tax measures in tax documents.

VAT reporting functionality for United Arab Emirates

Value added tax (VAT) was introduced in the United Arab Emirates on January 1, 2018. The issued Federal Decree Law No. (8) of 2017 on Value Added Tax outlines the tax scope, rate, responsibility for tax, and supply of goods and services in all cases. For more details on VAT regulations, see Federal Tax Authorities of United Arab Emirates.

Customers using the October '18 release of Microsoft Dynamics 365 for Finance and Operations will be able to configure the UAE legal entity with country-specific functionality related to VAT reporting in the country.

The following country-specific enhancements have been added to UAE localization to align with the requirements of VAT reporting:

- Legal entity configuration has been extended with additional fields required in VAT reports.
- VAT reverse charge functionality has been enabled for ARE country context to properly record taxable domestic operations within GCC territory.
- UAE country-specific sales invoice and credit notes printout layouts have been added with additional columns and VAT summary information.
- Sales invoice and credit notes for UAE are printing in two languages, including ar-AE Arabic and user interface language.
- VAT return declaration report is printed to electronic file format ready for uploading to the e-TAX FTA portal.
- Standard audit file functionality has been shared with UAE local functionality. Required by Federal Tax Authorities, FTA VAT audit file (FAF) can be exported accordingly to required CSV format.

All companies in UAE are responsible for carefully documenting their business income, costs, and associated VAT charges and sending regular VAT reports to federal tax authorities. The VAT reporting functionality will be adopted by all customers of Dynamics 365 for Finance and Operations.

Microsoft Dynamics 365 for Finance and Operations - Regulatory Services, Configuration service

The Microsoft Dynamics 365 for Finance and Operations - Regulatory Services, Configuration service is the evolution of the regulatory configuration tool (also known as Electronic Reporting). The Configuration service allows partners and customers using multiple versions of Microsoft Dynamics 365 for Finance and Operations and earlier Microsoft Dynamics AX versions (such as AX 2012 and AX 2009 for India only) to configure regulatory features only once using a common service. The Configuration service targets a no-code programming approach, allowing power users to configure frequently changed legal requirements for regulatory reports, e-invoices, payment formats and tax rules, rather than writing code in multiple applications.

The Configuration service is the first component of Regulatory Services to be released. Regulatory Services will provide functionality that can be integrated with any business application. This service allows developers building applications to focus on their core functionality rather than worrying about meeting the increasing number of legal requirements around the globe.

The Configuration service provides the following capabilities:

- Access to visual designers to configure regulatory reports, e-invoices, payment formats, tax rules, and other regulatory features.
- Metadata that provides the ability to either import a description of the target application's artifacts, such as data tables, enumeration, and classes, or use connected applications for accessing metadata. Metadata is used at design time to define data sources of a data model mapping version.
- Support for regional deployments to enable users to select what region their data is held in. There will be a limited set of countries available with the initial GA release, but these will be added to over later releases.

Regional availability

When the Configuration service is generally available, it will be available in all regions in which Finance and Operations is available. However, data will be initially hosted only in a US datacenter.

For a complete list of regions, see the Dynamics 365 International Availability Guide.

Usability and productivity

- A new tabular grid is available throughout the application that provides greatly improved scrolling performance, which is important in scenarios where browsing through data is desired.
- Grid totals can be requested by business users for numeric columns in tabular grids.
- Business users are able to group data in a list based on the values in one or more columns and see subtotals in the numeric columns for each grouping level.
- Business users are able to export more than 10,000 rows to Excel.
- Business users are able to edit multiple records in a grid with a single action using the new "Mass update" capability.
- Hyperlinks on fields can now be suppressed when the links are not desired.
- Hyperlink click behavior on editable controls now aligns with other Office products.
- Developers are able to define custom keyboard shortcuts for actions on forms.
- Business users now have additional filtering capabilities, including:
  - The ability to use the date picker when filtering on date fields.
  - The ability to see the available values when filtering on enum fields.
  - The ability to filter on legal entity in cross-company forms via the Filter pane or grid column headers.
  - Making it easier for users to find the fields they want to filter on.
  - Improving the type-ahead behavior for lookups in the Advanced filter/sort dialog.
  - Enabling Excel-like filtering behavior in grid column headers.

Personalization improvements

For each form in the system, business users can create, save, and share multiple optimized views that can be targeted for certain groups of users or for certain business tasks. Views, by default, contain any modifications to the form done through personalization. For lists, these views additionally include the query, which allows users to quickly return to commonly filtered datasets. Saved views have the potential to greatly simplify the user experience and improve user productivity.

To aid business users in creating simpler, more targeted "views" of forms, a number of enhanced personalization capabilities have been added, including:

- Promoting common personalization tasks (for example, adding and removing columns from a grid) into the context menu.
- Allowing users to expand or collapse sections or change tabs while in personalization mode. No longer will users have to repeatedly exit personalization mode, expand a section or change a tab, and then re-enter personalization mode to make all the desired form modifications.

- Permitting users to hide any field via personalization, specifically now including mandatory fields. This allows a user to create a simplified experience where mandatory fields that are defaulted by business logic are not shown. Hidden mandatory fields are also temporarily made visible if they are empty when a save is attempted.
- Allowing users to move fields between fast tabs. This allows a data entry experience to be optimized by, for example, putting the most important fields in a single fast tab or by moving fields into grids.

Additional demo data

Completing data entities and data packages to enable seamless and efficient management of demo data to optimize for the best possible sales and trial experience for prospects. These additional components focus on scenarios for manufacturing, distribution, and sales.

Go local

Customers can opt for a fully data-resident online Microsoft Dynamics 365 Finance and Operations subscription. All customer data, code, and metadata will be contained in the data region of choice. Data residency will be made available starting with the Europe data region.

Supportability rules

Additional rules to identify and adjust suboptimal setup or configuration options have been added to the system. Examples include: delete shipment terms that have never been used, delete payment terms that have never been used, and periodic clean-up of price and discount sales and purchase trade agreements that have expired or never been used.

Test automation support

An administrator or functional power user can author, run, and manage an automated test regression suite, based on task recordings, that greatly reduces the impact and cost of validating updates to Dynamics 365 for Finance and Operations environments. These tests can be run on UAT environments.

Troubleshoot document routing agent

Document routing agent is used to manage large print jobs being sent to on-premise printers. Troubleshooting print issues is now easier. Extensive error reporting and diagnostics enable IT administrators to detect and fix issues without having to call Support.

Upgrade automation

If you are a customer operating Dynamics 365 for Finance and Operations, Enterprise edition, you will be able to apply a major version upgrade (such as 7.1 to 7.2) without involvement from the Microsoft operations team. Orchestration of upgrade steps, including preparation of a staging area, data upgrade, and applying new versions, are performed via an automated process. While the Microsoft operations team is available on a stand-by basis to assist with queries or exceptions, you can schedule and carry out the entire process with minimal downtime and at your convenience.

On-premises deployment enhancements

The on-premises deployment option for Dynamics 365 for Finance and Operations has been enhanced in many areas, with a focus on simplifying setup, operations, monitoring, and servicing.

Managing batch jobs

In the October '18 release, Finance and Operations administrators will be presented with a set of new features in managing batch jobs.

Productive tools that help manage batch job creation, execution, and investigations are crucial in helping administrators manage the performance and efficiency of the system.

Administrators will be able to perform common tasks in a more productive manner. They will be able to easily copy batch jobs, assign co-administrators, and specify time ranges during which jobs within a batch group can start execution. There will also be improvements to the batch management user interface to simplify investigations.

We also started working on designing a new framework that provides scalable and dedicated batch job processing units that are not shared with user interactive sessions or integration endpoints.

Integration with Dynamics 365 for Field Service – inventory and projects

Integration with CDS data integration will be provided to support scenarios where Field Service activities are done outside of Dynamics 365 for Finance and Operations.

This phase focuses on giving field technicians insight to the inventory information from Finance and Operations, allowing them to update inventory levels and do material transfers. In addition, companies installing or servicing sold goods will benefit from better control and visibility to the full sales and service process with integration from projects.

Functionality includes integration of:

- Warehouse information
- On-hand inventory information
- Inventory transfers

- Inventory adjustments
- Dynamics 365 for Finance and Operations projects connected with Dynamics 365 for Field Service work orders

The CDS data integrator synchronizes data by using customizable projects. Standard templates can be used to create custom integration projects, where additional standard and custom fields and entities can be mapped to adjust the integration and meet specific business needs. The field service integration builds on top of the existing prospect-to-cash functionality.

Extend analytical workspaces by mashing up external data with PowerBI.com

While report visuals and layout changes can be done in the client, for extension scenarios such as mashing up external data or creating calculations, power users can deploy the analytical workspace into their own PowerBI.com subscription. They can use the full power of Power BI to make customizations to reports, including use of the Power BI mobile app and the Power BI Q&A feature.

Bring your own database using Azure Data Lake and Power BI data pools

This new offering combines the best features of the entity store and bring your own database (BYOD) into one service. You can choose data - Entity store schemas or Entities, and the service keeps the data refreshed. No need to schedule or monitor export jobs. Data can be stored in Azure Data Lake. Because the data is visible to Power BI as data pools, you can create rich data mash-ups by combining data from Finance and Operations with other sources. Now you can import your own data into Azure Data Lake and build your cloud data warehouse. Since the data is in your own Azure subscription, the data is accessible using other Azure services such as Azure Data Factory, Azure Machine Learning, Databricks, and Hadoop.

Edit analytical workspaces in the client

End users can modify ready-made analytical workspaces (including financial reports) themselves without leaving the client or hiring developers. This capability extends to all ready-made financial reports as well as all other reports in analytical workspaces.

Pin Power BI dashboards to Finance and Operations workspaces

You will soon be able to pin Power BI dashboards to Microsoft Dynamics 365 for Finance and Operations workspaces for ease of access. You can author dashboards by combining data from Finance and Operations as well as other systems. Dashboards that contain natural language-based queries as well as rich visualizations from many different systems can now be added to workspaces to provide comprehensive visibility into business processes.

Real-time Power BI reports

If you are a customer who is currently running Microsoft Dynamics 365 for Finance and Operations version 7.3 or 8.0 or later, most analytical workspaces and embedded Power BI reports in the product are updated in real-time when you update your platform. The entity store is refreshed "hands free," so your administrator does not need to manage the entity store refresh schedule. Microsoft will manage the refresh for you.

The system makes an effort to refresh models (or parts of models) in real time. Administrators can see the refresh status of entity store data including warnings from models that are refreshed on a nightly basis (as opposed to real time). Models that are refreshed overnight by default can also be refreshed on demand.

If you are a developer, you can turn on best practice warnings to make the compiler show a list of entities and tables in aggregate measurements (such as analytical models) that will be refreshed on a nightly basis. You can customize entities and tables to support real-time updates.

Translation service

This release will improve the user interface, content translation experience, and productivity. In this release, we will add support for multilanguage translation requests, make the Dynamics 365 Translation Service API available, and add support for applications targeting CDS.

Talent

Overview of Dynamics 365 for Talent October '18 release

The Dynamics 365 for Talent update for October '18 includes applicant tracking system (ATS) capabilities, departmental onboarding support, and new benefits, workforce, and organization management capabilities. This latest release opens the door for Dynamics partners to extend Talent and bring additional capabilities to the Common Data Service (CDS) for Apps.

Streamlined, intelligent, and compliant recruiting

Dynamics 365 for Talent: Attract is winning over recruiters and streamlining their workflow by bringing together Dynamics, Office 365, Skype and LinkedIn in ways that no other provider has. Dynamics 365 for Talent consolidates sourcing, screening, scheduling, offer management, and onboarding activities into one modern and extensible suite.

Intelligent recruiting is now a reality. Attract uses Azure Machine Learning to highlight qualified candidates by comparing their profiles to your job requirements. Skype Interviews makes interviews more collaborative by adding a shared whiteboard and coding environment for real-time technical exercises.

Hiring templates can be customized per job to enable global customers to account for regional hiring differences. Attract can also connect to DocuSign and Adobe Sign to capture digital signatures that are legally binding in nearly every country.

Create a personalized onboarding experience for every new hire

Dynamics 365 for Talent: Onboard enables organizations to leverage the experiences of their best managers. Easily drive onboarding consistency through improved templates and distribution options. Integrate department or team onboarding with administrative onboarding into a single modern experience. Measure reach and content effectiveness with Power BI reporting.

Employee empowerment and improved HR

Dynamics 365 for Talent: Core HR continues to push administrative processes from the HR Pro to the employee. This effort not only enables the employee to have better control and management of personal information but streamlines the process by removing the HR bottleneck. HR continues to be free from administrative tasks, making time for more strategic efforts.

Employee-driven benefits management

Company-offered benefits continue to be a key component when attracting and retaining top talent. HR continues to look for ways to reduce complexity and improve efficiency in their benefit management systems. Employees manage their own benefit elections as they are onboarded, or as life events occur using easy and intuitive enrollment guides. The flexibility of Talent streamlines the entire setup and election process while providing a connected experience across benefit providers.

Flexible organizational management

To run a multinational company at optimal efficiency, it's imperative to have the right people in the right place. Varying organizational structures across multiple locations can make this difficult. Talent delivers a flexible solution for managing these unique structures, whether your jobs and positions are global or regionally specific. It can also be challenging to manage the employee lifecycle across multiple regions. With Talent, managing these processes can be tailored to your company's specific needs.

Workforce management that works for you

Core HR now provides an intuitive way for employees to submit and track their time off. Democratization of time logging enables more accurate schedules, helping managers to make better scheduling and resourcing decisions. Employee satisfaction is improved with minimized last-minute schedule changes.

HR professionals now have tools to create flexible leave and absence rules and policies to meet company compliance expectations while simplifying the time-off process. Employees and managers can see who will be at work, while HR professionals have a view of the entire organization all through a modern calendar experience. Through the extensibility in the Common Data Service for Apps, partners can provide solutions to deliver seamless time entry and tracking that meets regional and regulatory compliance needs.

Digital transformation of HR at your own pace

Many companies struggle today to transform their HR experiences, especially since they currently run on a multitude of disparate systems. Customers can now bring all their systems together to the Common Data Service for Apps to transform their employee experiences and HR processes. Talent is designed to enable flexible and scalable solutions that adapt to a business' continuing evolution. Create intuitive solutions for employees by leveraging common data services and use Microsoft PowerApps, Microsoft Flow, and Microsoft Power BI to extend and analyze data. Companies can also integrate their third-party systems, such as payroll and time and attendance with Talent to provide employees with a seamless experience.

Summary of what's new in Dynamics 365 for Talent

This topic lists the features planned for release in Microsoft Dynamics 365 for Talent between October 2018 and March 2019.

Attract

Feature	Release type	Target release month
Candidate profile connection	General Availability	October 2018
Dashboards and notifications	General Availability	October 2018
Extensibility	General Availability	October 2018
Job and process management	General Availability	October 2018
Offer management	General Availability	October 2018
Relevant jobs and candidates	General Availability	October 2018
Skype interviews	General Availability	October 2018
Sourcing	General Availability	October 2018
Talent pools	General Availability	October 2018

Onboard

Feature	Release type	Target release month
Import activities from other guides or templates	Public Preview	July 2018
Managed activities	Public Preview	July 2018
Bulk guide updates	Public Preview	July 2018
Assignee placeholders	Public Preview	August 2018
Onboarding teams	Public Preview	August 2018
Core HR checklist integration	Public Preview	October 2018
Auto-generated contacts	General Availability	October 2018
Auto-save	General Availability	October 2018

Feature	Release type	Target release month
Customizable welcome emails	General Availability	October 2018
Due date placeholder	General Availability	October 2018
Email sent from creator	General Availability	October 2018
Export excel	General Availability	October 2018
Guide backdating	General Availability	October 2018
iFrame add-in	General Availability	October 2018
Scheduled guide send	General Availability	October 2018
Template update notification email	General Availability	October 2018
Undo Redo	General Availability	October 2018

Core HR

Feature	Release type	Target release month
Extended Core HR entity scope on Common Data Service for Apps	General Availability	October 2018
Company-based jobs and positions	General Availability	October 2018
Leave and absence management	General Availability	October 2018
Employee benefits enhancements	General Availability	October 2018

Compliance

Feature	Release type	Target release month
ISO and SOC compliance	General Availability	November 2018

CDS for Apps

Feature	Release type	Target release month
Onboard on CDS for Apps	General Availability	October 2018
Attract on CDS for Apps	General Availability	October 2018
Core HR entity sync to enable Finance and Operations integration	General Availability	October 2018

Attract

- Sourcing:
  - Enables recruiters and hiring managers to have visibility into the upper pipeline of sourcing with the tracking of prospects, ability to push prospects from LinkedIn (RSC), and the bringing together of a unified profile for a candidate with the information that is known from LinkedIn (candidate opt-in), HR, and Office Graph (productivity for internal candidates).
- Candidate Profile:
  - Brings together data from multiple sources into a single view for the hiring team. Includes data from external sources such as LinkedIn, Indeed, CareerBuilder, Office 365, Core HR for internal or past employees (via CDS). Provides means for the candidate to maintain their profile and external links.
- Talent Pools:
  - Manage all current and past candidates, referrals, and prospects in global, shared, and personal talent pools.
- Video Applications:
  - Integrate Stream and Video Indexer into talent to bring rich intelligent video scenarios for the hiring team and candidates.
- Offer Management:
  - Candidates are able to view offer and sign using Adobe and DocuSign.

Dashboards and notifications

Dashboard will guide recruiters and hiring managers to relevant actions. An in-depth search experience will help users quickly navigate the system. Notifications will provide the user with supplemental information to streamline the recruitment process.

The dashboard will provide deeper insight into the recruiting process for recruiters and hiring managers. The dashboard will provide easily identifiable and actionable items that can be acted upon quickly to keep the recruiting process moving. New search capabilities will provide the ability to quickly find information by intelligently understanding key words and phrases. Notifications will deliver usable calls to action and bring relevant information to the forefront.

The new dashboard in Attract will surface relevant data for the various Attract roles. It will provide guidance to the user on items needing attention, trends, and relevant information. Intelligent search will supplement the dashboard with the ability to quickly find relevant records by searching across the structured and unstructured data in Attract. Notifications will provide calls to action within the application, in addition the existing notifications received in email today.

Extensibility

We know that each organization's hiring process is unique and designed to highlight the distinctiveness of the organization. Having the ability to extend the native application is key to supporting these needs. We are bringing extensions that allow organizations to incorporate PowerApps, Microsoft Flow, Power BI, Office Forms, Microsoft Stream, and more. This will allow for specialized activities and the extension of the core data and process.

Organizations will be able to set up the system to meet their needs and maintain their uniqueness throughout their hiring process. This will enable larger customers or customers with unique business needs to tailor the hiring experience. Customers will also be able to use the extensibility to support their regulatory compliance needs.

Extensions will allow customers to do the following:

- Extend the data model and pages to capture custom data for jobs and candidates.
- Configure the current hiring process with custom activities using PowerApps, Microsoft Flow, Office Forms, Microsoft Stream, web pages (iform), and more.
- Through the connectivity of CDS, allow for extensions to various processes using custom logic though Microsoft Flow, Logic Apps, Azure Functions, and more.

Offer management

Recruiters and hiring managers can create and approve offers using their organization's defined package templates. They also can provide candidates with the industry standard DocuSign and Adobe Sign capabilities to view and accept their offers and begin their onboarding into the organization.

Organizations, as part of their digital transformation story, are looking for a centrally managed and standardized offer processes. Organizations can create configurable and reusable offer package templates, saving a lot of time and effort when every new offer needs to be created. Candidates also have a simplified experience in terms of how they can view and accept the offers, which arguably is the highest emotional point in their job hunt journey so far.

With offer management:

- Talent admins can create and manage their organization's offer document templates and offer package templates.
- Talent admins can manage the offer data sets applicable for their offers. These offer data sets provide the guardrails to the offer values.
- System intelligence can recommend which package templates to be used for creating offers based on the understanding of the job and the candidate.

Skype Interviews

This feature enables native integration with the Skype Interview platform for remote screenings and interviews. Today we support the ability for screenings and interviews to be set up and carried out over Skype for Business. With this feature, users will have a choice of Skype for Business or Skype Interviews.

Skype Interviews has an online interviewing experience with rich whiteboarding, coding, and video capabilities. It is designed from the ground up as a place to interview candidates for new opportunities. The direct integration will enable users to provide rich interview experiences to their candidates. This experience allows for online code sampling and whiteboarding. A richer online interview experience helps to further extend the candidate experience, which Attract brings deeper into the interviewing process.

The initial capabilities will allow users to decide on which Skype platform to perform online interviews.

Talent pools

Recruiters can organize and maintain their list of candidates and prospects in talent pools. Talent pools can be private or shared among recruiters.

In addition to sourcing new prospects, recruiters look at previous applicants who might be a good fit. Recruiters can use talent pools to track previous applicants and re-engage them when relevant opportunities become available.

Among the benefits of this feature:

- Recruiters can create talent pools and organize them to fit their recruiting process.
- Candidates can be imported directly into those talent pools or moved from jobs where they have applied.
- Search and filter make it easy to find the right candidates from your talent pools.
- When viewing a candidate profile, it's easy to see their past application history.
- Azure intelligence will automatically match candidates with relevant open positions.
- The right candidates can be easily added as prospects to your open positions.

Relevant jobs and candidates

Recruiters can be overwhelmed by trying to determine which candidates to focus on. Attract automatically highlights candidate profiles that match the job requirements, saving time for the recruiter and helping them close their positions faster by being able to focus on the most relevant candidates.

Candidate profiles are intelligently compared to job requirements. The output of this analysis enables several intelligent recommendation scenarios:

- Relevant candidates are identified when viewing your jobs.
- Jobs are recommended when viewing groups of candidates in your talent pools.
- Jobs that a candidate might be a good fit for are displayed when viewing a candidate profile.

Candidate profile connection

Having as much information as possible about your candidates is critical to the evaluation and selection of the right hire. Further expansion of the candidate profile will allow for more information to be tracked and managed. This will also enable the candidate data to be used by other features such as relevance and search.

Selecting the right candidate for the job is critical, and information is key. Having as much information in a compliant, ethical way about your candidates is important to understanding their background and fit for the role. Enhancements to the candidate profile will help bring about the right level of information. Lastly, capturing this information can be tedious for candidates. This will be streamlined by allowing candidates to quickly complete their profile based on their current LinkedIn profile.

Recruiters and hiring managers will have many more options with regard to what data they can track to complete a holistic profile for a candidate. Candidates will be able to quickly create a profile upon application based on their LinkedIn profile simply by authorizing the use of their LinkedIn profile at the time of application.

Job and process enhancements

Job and process management will formalize the recruit process by enhancing the structured data needed to track an opening from creation to fulfillment. Furthermore, these features will provide a deeper integration between core HR systems and Attract by leveraging data that is published to Common Data Service for Apps.

Having control within the recruit process is a critical part of organizational growth. This involves having formalized structured data with added approval capabilities to ensure that proper controls are in place within the recruitment process. Also, with deeper integrations to core HR systems, there is less data duplication, which will result in fewer data entry errors. The deeper integration to core HR systems also ensures that recruiters and hiring managers are viewing the same data as HR administrators, therefore reducing questions and gaining efficiency in the process.

New capabilities include tracking more data on a job within Attract to formalize the recruitment process. The introduction of an approval process for job management will enhance collaboration and provide further definition to the recruitment process. Leveraging Common Data Service for Apps will bring job- and position-related data from the core HR system into Attract and reduce duplicate entry and ensure accuracy.

Sourcing

This feature enables recruiters and hiring managers to have visibility into the sourcing pipeline by providing the ability to track prospects, push prospects from LinkedIn Recruiter using Recruiter System Connect, and create a unified profile for a candidate including the information that is known from LinkedIn (with candidate opt-in).

Recruiters will now be able to maintain a consolidated list of all candidates that they are prospecting from all sources. Further, recruiters who use both Attract and LinkedIn Recruiter will have a streamlined experience and will be able to see Attract data within LinkedIn Recruiter, allowing them to stay focused on sourcing without having to jump between applications. This will enable recruiters to move quickly and efficiently in identifying candidates who would be a potential fit for the role.

New capabilities include an area in which to manage prospects for a job separately from applicants. Recruiters who are also licensed users of LinkedIn Recruiter will be able to use the various capabilities of LinkedIn's Recruiter System Connect. This enables the recruiters to identify candidates in their search results from within LinkedIn Recruiter who they already have a profile with in Attract. For these candidates, they also will be able to see information about the candidate's past application history within LinkedIn Recruiter without having to jump between applications.

Dynamics 365 for Talent: Onboard

Based on customer feedback, Onboard has been enhanced with collaborative capabilities to allow more individuals to create and implement onboarding experiences. Onboard now also includes template authoring workflows to enable template updates to be rolled out to all instances instantiated from the template.

Assignee placeholders

Templates at the department level are made as general as possible to allow for maximum reuse. For example, due dates are set relative from the new hire's start date (for example, two weeks after start date). Assignees can also be generalized in the same fashion by allowing tasks to be assigned to a placeholder to be mapped at runtime.

Managers can insert assignee placeholders in their template, to be filled out later. For example, a group of tasks can be assigned to "business administrator" in a template. Then, when the someone uses that template, they specify who "business administrator" is. This allows for more flexibility and template reuse.

Auto-generated contacts

Assignees and helpers are now automatically added as contacts on the Contacts portion of the onboarding guide.

Auto-save

Don't worry about saving or losing your work again. Your onboarding guides and templates will be automatically saved as you work.

Bulk update guides

Managers can bulk update already sent guides by "pushing" out updates from the origin template.

Managers are realizing that keeping onboarding content fresh is an effective way to keep new hires engaged before they start and throughout their first weeks or months. For example, university students have 6-8 months before they start—so recruiters like to push fresh content periodically through the school year to keep them engaged.

Instead of manually updating each template, managers can centrally edit, add, or delete content from their templates and push out updates to already sent guides. Guide recipients will be automatically notified when they have new onboarding content to review.

CoreHR checklist integration

HR professionals can now ensure that administrative checklist items in CoreHR are automatically included in every new hire's onboarding guide.

This feature provides comprehensive company, department, and team-level onboarding surfaced through a single onboarding experience for new hires.

Checklist items are stored with employee records in Common Data Service. When a new onboarding guide is created, checklist items from CDS are automatically included in the guide as a managed activity.

Checklists remain visible in employee self-service and the completion status remains synchronized.

Customizable welcome emails

Managers can personalize the welcome email sent to their new hires when it's time to onboard. This creates a personal touch and improves email response rate.

Due date placeholders

Managers can insert due date placeholders as an offset from a new hire's start date, such as two weeks after the start date or three days before. Due dates are updated automatically if the new hire's start date is changed.

Emails sent from the guide creator

For a more personalized touch, the welcome email and notification emails sent to your new hires now come directly from the guide creator instead of a Dynamics 365 service account.

Export to Excel

Hiring managers can export all the guides they create, or contribute to, to an Excel file that can be used for reporting and Power BI.

Guide backdating

Create onboarding guides for new hires that have a start date in the past.

IFrame add-in

New add-in to include other websites or Office Forms in an onboarding guide. This add-in is useful for embedding questionnaires or surveys.

Import

Hiring managers can import content from other guides or templates to ensure that the latest content is always reflected. This helps their hires get started quickly and makes it easier to include the latest content from their manager or department leader.

Managed activities

Department leaders can dynamically update templates that they have distributed to their managers to ensure the latest content and policy are part of every employee's onboarding guide. Creating a consistent onboarding experience for every new employee is critical for new hire success. By allowing department leaders to manage content centrally, they can ensure a baseline level of consistency for every new hire.

With this feature, department leaders create and share templates using the existing workflow. When other managers use or import their templates, the update permissions are retained, allowing the original leaders to "push" updates into them dynamically.

Onboarding teams

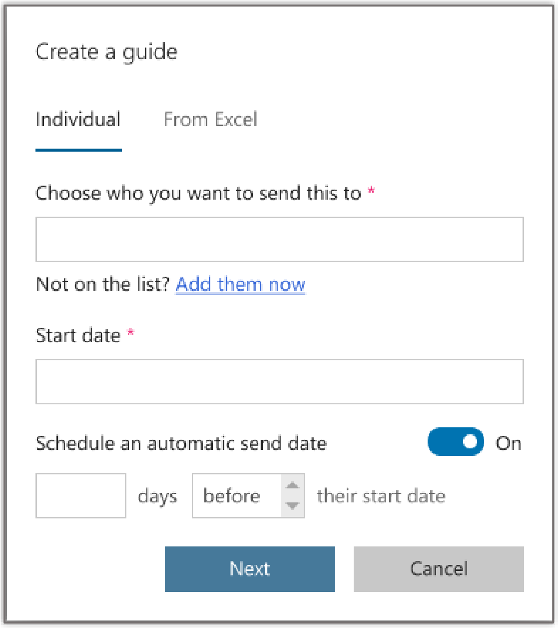
Department leaders can define their team or department members to streamline reporting, collaboration, and content sharing.

Department leaders want visibility into onboarding progress and manager engagement, but defining a department can be difficult as it's not always based on organizational reporting structure. With this feature, department leaders can invite managers to their team. Upon opting in, the department leaders get visibility into the guides and templates that each team member creates. Team owners also get a special dashboard that shows overall onboarding progress and manager engagement.

Scheduled guide send

Automatically send guides to new hires before, on, or after their start date with just a click. Reduce friction for managers and ensure that every guide is sent.

When creating an onboarding guide, managers have the option to have the guide automatically sent days before or after the new hire's start date.



Enabling and disabling automatic guide sending

Template update notification email

Guide creators will be automatically notified via email when a template they are using has been updated. Recipients will receive a digest email detailing what has changed in the template.

This feature ensures that managers are always aware of content changes so they know they have the latest. Once a template is shared, the recipients are automatically notified via email when it is updated.

Undo-redo

Quickly undo and redo changes as you are working your templates or guides. Reduce friction for managers by making it easier to correct errors.

This feature allows managers to undo or redo any change they make to activities, contacts, or resources.

Employee benefits enhancements

Offering competitive employee benefits is a key component when recruiting and retaining top talent. Benefits administrators need to easily configure a variety of benefits offerings while meeting compliance requirements. In addition, new employees need to onboard their benefits easily and existing employees need the ability to update their benefits when life events occur such as getting married or having a baby.

Simplify benefits configuration

Customized benefit rate tables – Simplify benefit creation and administration by creating benefit rates in an easy-to-use table format.

Qualified life events – Allow employees to update their benefits based on life events using a guided approach, ensuring they adhere to proper approvals and policies defined by HR.

Onboarding new hire benefits – With enhancements to eligibility rules, new employees have access to the right benefits at the right time and are easily guided through their initial benefits onboarding.

ACA reporting – In addition to electronically submitting 1094B and 1095C forms, HR can print and distribute 1095B and 1095C forms to employees and the IRS.

Extended Core HR entity scope on Common Data Service for Apps

Customers need efficient means to drive the digital transformation of their HR and Talent experiences to attract and retain critical talent. Having a single and coherent view of people is one of the critical foundations to achieve this. Most Core HR entities are already available in Common Data Service for Apps. The remaining areas will now also be made available to drive this digital transformation.

Customer and partners have more data available for the unmatched palette of tools to extend, customize, and integrate provided by Common Data Service for Apps. This includes tools such as Power BI, PowerApps, and Microsoft Flow. Integration to (for example) payroll and benefits providers can now be enabled.

Available areas

The following areas will be made available on the Common Data Service for Apps:

- Compensation entities
- Benefits entities
- Custom field support in CDS for Core HR entities

Leave and absence management

Effective leave and absence management is key to not only being compliant, but also to having an engaged workforce. Enhancements in this area of Talent allow for organizations to continue streamlining the administration of leave and absence plans, allow managers to take care of time-off schedules, and help employees to balance work and home life.

Each organization and region has unique business requirements related to leave and absence management. These might include policies on how employees can take time off or accrue time off. Allowing organizations to configure leave and absence to fit their unique business needs helps them stay compliant and streamlines the leave and absence management process.

Managers need to understand who is taking time off and who is planning to take time off to ensure the team is staffed appropriately. Providing managers with a single view of their team's time off enables them to have a suitable number of team members at work.

Employees sometimes struggle to know how much time off they have and if they will lose any time-off awards. By enabling employees to see their forecasted time off, they can plan how to balance their work and home life.

Configure time-off policies

Organizations can configure rules and policies related to their leave and absence plans. They can choose how employees accrue their time off, whether it's by years of service or by hours worked. They also can configure when this time off can be taken and if certain types of time off must be taken before others. If they allow employees to get a pay-out of their time off, this can be configured as well.

Managers can see an all-up calendar view of their team members' time off as well as company holidays and closures. This view shows them where they may have overlap as well as time-off trends for their team and enables them to drill down to gain a better understanding of an individual's time off.

Within employee self-service, employees now see not only their current time-off balances, but also what their time-off balances will be in the future.

Company-based jobs and positions

Flexibility in defining a company's organization is very important. Jobs may have universal descriptions and job families, while compensation, skills required, education, and other data may differ based on the company or region within which the job or position resides. Company-based job and position data provides an answer to both scenarios.

The jobs and positions feature allows an organization to define what data is shared across companies and what data is specific to an individual company. Support for company-specific data on jobs will include:

- Compensation
- Skills
- Certificates
- Tests
- Education
- Screening
- Job tasks
- Areas of responsibility

Positions may also be shared or company-specific based on company requirements.

Additional support for company-based security for job and position data is key when accessing data. With this feature, users can only view and enter data based on their roles and access to individual companies within the enterprise.

Talent certified for ISO and SOC

Dynamics 365 for Talent now is certified for ISO (27001, 20017, and 27018) and SOC 2.

Enhancements to Talent that bring it into compliance with ISO and SOC standards mean your personal data is protected and services are secure and available at all times.

Retail

Overview of Dynamics 365 for Retail October '18 release

The October '18 release of Dynamics 365 for Retail includes the following themes:

- A comprehensive omni-channel solution that is flexible, extensible, and easily updatable.
- With the October '18 release, Dynamics 365 for Retail will provide an **on-premises deployment option** for retailers who are unable to move to the cloud due to organizational policies or regulatory requirements.
- Retailers want to leverage standard applications while being able to customize a solution to meet their business needs, but have historically struggled to customize in a sustainable way that meets their long-term needs. Retailers are often left with a custom solution with a very high cost to maintain and upgrade. Dynamics 365 for Retail is a cloud-ready, **completely sealed application** with extension points across HQ and front offices to support various business processes. The October '18 release includes an **expanded set of extension points and capabilities** across the entire solution footprint.
- Retailers require systems that are scalable, reliable, and highly performant to manage their business operations. Moreover, they need the ability to isolate and service their customer-facing channels (stores, e-commerce, and so on) with no downtime, ensuring no loss of sales and providing a superior customer experience. The October '18 release introduces the **Retail Cloud Scale Unit**, which can help improve serviceability and reliability to business operations.
- Improvements to core business processes and employee empowerment.
- End-of-day processing capabilities are critical so that retailers can manage their daily operations in stores as well as their integrated financials in the back office. Moreover, retailers need fast, reliable, and secure payment processing capabilities that work across their channels of engagement with customers, enabling cross-channel scenarios like buy online and pick up in store with ease. With the October '18 release, Dynamics 365 for Retail has enhanced the **integrated end-of-day processing** capabilities, providing a more reliable, performant, and scalable solution. In addition, the solution now incorporates a more **comprehensive, secure, and reliable omni-channel payment solution** that can be leveraged by customers and partners around the world, while providing an out-of-box native payment connector for North America that supports a wide variety of processors and acquiring banks.
- Dynamics 365 for Retail is designed to increase sales and productivity for retailers with fast and assisted selling, whether on the go or on the phone. The solution is designed to work seamlessly across tablets and phones from all major platforms (Windows, iOS, and Android). In addition, retailers can choose the right device and form factor that suits their needs.
- Enhanced Unified Commerce through distributed order management.

- Through **distributed order management** capabilities, Dynamics 365 for Retail provides the ability to intelligently source and fulfill orders across channels with a single, global view of inventory, locations, customer, and fulfillment options through configurable business rules. In addition, the fulfillment processes at stores are significantly enhanced, allowing retailers to convert them into micro-warehouses that help drive down costs while improving customer service.
- In addition, Dynamics 365 for Retail has improved core business processes including inventory management and visibility at stores, data distribution from HQ to stores, offline capabilities of POS, shifts, receipts, returns and exchanges, and omni-channel workflows as well as embedded business intelligence capabilities in HQ.

Summary of what's new in Dynamics 365 for Retail

This topic lists the features planned for release in Microsoft Dynamics 365 for Retail between October 2018 and March 2019.

Planned features

Feature	Release type	Target release month
Payment reliability and usability improvements	General Availability	October 2018
Payment connector	General Availability	October 2018
Retail Cloud Scale Unit	General Availability	October 2018
Distributed order management (DOM)	General Availability	October 2018
Support for on-premises (LBD) deployments	General Availability	October 2018
Improved extensibility	General Availability	October 2018
Support for upgrade and N-1	General Availability	October 2018
Upgrade and N-1 support for India	General Availability	October 2018
Retail localizations for Eastern Europe	General Availability	October 2018
Fiscal printer integration sample for Italy	General Availability	October 2018
Improved omni-channel order processing	General Availability	February 2019

Enhanced performance and scalability

Investments have been made to identify and improve slow-running queries in the following key areas: sales transactions, customer order and purchase histories, customer order creation, posting, and virtual catalog.

Improved extensibility

More user interface and API extensions have been added to the Retail headquarters, POS (Retail Modern POS and Cloud POS, and Commerce run-time (CRT), allowing environments with customization to easily be serviced and updated without impacting the core application.

Developers can now extend the user interface with custom controls and add or hide sections or app bar buttons. Requests and triggers can be overridden to allow custom logic before or after core operations.

Improved omni-channel order processing

Retail Modern POS (MPOS) and Cloud POS users can provide better, more streamlined customer service by returning products from across multiple transactions when returning by receipt or from purchase history. Previously, this required a different return transaction for each originating sale, which increased the number of steps and checkout time.

In addition, users will be able to perform exchanges during customer order processing at the store. Previously, this required two transitions when performing a return and a sale within the same order.

Payment connector

A new omni-channel "out of the box" payment connector to Adyen payment services is available, providing credit/debit (EMV) "card present" payment processing for Retail Modern POS and Cloud POS (through hardware station), and "card not present" payment processing for e-commerce/call center. The shared omni-channel token enables seamless flows such as buy online and pick up or return in store.

The Adyen payment services are available globally, including the following markets:

(North America) United States, Canada; (Europe) Austria, Belgium, Denmark, France, Germany, Finland, Italy, the Netherlands, Norway, Russia, Spain, Sweden, Switzerland, Turkey, United Kingdom; (Latin America) Brazil, Mexico; (Asia Pacific) Australia, China, India, Indonesia, Japan, Malaysia, New Zealand, the Philippines, Singapore, South Korea, Thailand

In addition, the extensibility scenarios for payments have been significantly enhanced so that partners/ISVs can write reliable and secure third-party payment connectors.

Payment processing

Payment processing flows and integration touchpoints have been refactored to increase reliability and stability between in-store applications (Retail Modern POS and hardware station), and payment devices.

Retail Cloud Scale Unit

Retail deployment topologies now include the Retail Cloud Scale Unit (RCSU), which separates the Retail Server, Cloud POS server, Commerce run-time (CRT), and channel database components from the core back office. This improves performance across all aspects of the system by distributing the channel-specific workloads into a separate scale unit. In addition, the channel components can now be serviced independently, reducing downtime and allowing for coordination based on back-office or channel requirements.

Support for upgrade and N-1 (AX 2012)

Existing Dynamics AX 2012 retailers can now upgrade their back-office headquarters components to the latest Dynamics 365 for Retail, while allowing their distributed store systems to remain on the AX 2012 R3 version (N-1). This allows staged roll-outs, upgrading the store systems over time, during optimal scheduled downtimes. In addition, retailers deploying new (non-upgrade) Dynamics 365 back-office systems can now take advantage of the N-1 capabilities.

Moreover, enhancements have been made to improve the experience and reliability of the end-to-end upgrade process of customers running Dynamics 365 for Retail and Dynamics 365 for Finance and Operations (7.0, 7.1, 7.2, and 7.3), including improved support for backward and forward compatibility between minor version updates.

Distributed order management

Retailers can now take advantage of intelligent Distributed Order Management (DOM) algorithms to optimize their order fulfillment operations across their enterprise. DOM automatically determines the best possible fulfillment location across warehouses, distribution centers, or even stores based on user-definable profiles containing the rules, scope, and delivery methods.

Enhanced order fulfillment capabilities within Retail Modern POS and Cloud POS help turn each retail store location into a micro-warehouse, which ensures orders are filled in the most efficient, cost-effective manner.

Support for on-premises (local business data) deployments

Dynamics 365 for Retail allows retailers to use flexible deployment options (on-premises or in the cloud) across the entire system—from brick-and-mortar stores to the retail headquarters. The local business data (LBD) deployment option has been enhanced to include support for the following components: Retail Modern POS (MPOS), Cloud POS, Retail Server, Channel database, Hardware station, and third-party e-commerce integrations.

Support for upgrade and N-1 for India

Existing Microsoft Dynamics AX 2012 R3 customers in India can now upgrade their retail solutions to Dynamics 365 for Retail. In addition, the customers may take advantage of the N-1 support that lets stores that run AX 2012 R3 POS work with retail headquarters on Dynamics 365 for Retail after an upgrade.

Retail localizations for Eastern Europe

Microsoft Dynamics 365 for Retail now supports mandatory regulatory requirements in the Retail area for six Eastern European countries: Czech Republic, Estonia, Hungary, Latvia, Lithuania, and Poland. The local functionality includes processing of cash payments in accounting according to local regulations, defaulting of sales dates in retail invoices, substitution of tax groups in retail return transactions, retail invoice numbering, and processing of advance invoices for customer order deposits. The localization of call center functionality for these countries will be available in later updates.

Fiscal printer integration sample for Italy

Microsoft Dynamics 365 for Retail now contains a sample of the integration of POS with fiscal printers for Italy. The integration sample supports one of the popular fiscal printer models available on the Italian market and enables printing fiscal receipts in major retail sales scenarios in stores in Italy. The sample is a part of the Retail SDK. It may be built and used as-is; implementation partners may also extend the integration functionality or build integration with other fiscal printer models based on the sample.

Business Central

Overview of Dynamics 365 Business Central October '18 release

With the October '18 release, Dynamics 365 Business Central is available in the cloud, on-premises, and in hybrid deployments. Pick your flavor of Business Central, or use your existing on-premises solution of Dynamics GP, Dynamics NAV, or Dynamics SL and connect to the cloud through Business Central.

Business Central partners get a portal to facilitate their interactions with customers and to manage the lifecycle of their applications and customizations. Business users get a further streamlined and refreshed user experience with many productivity improvements, facilitating heavy transactional users. The service is also going through a hardening process, with much improved resiliency, robustness, and performance across the application.

Business Central everywhere - cloud, hybrid, and on-premises availability

Business Central gets an on-premises deployment option that serves as a successor to Dynamics NAV. In other words, rather than a new version number for Dynamics NAV, customers can get Business Central on-premises. The experience for partners and customers on-premises is no different from the familiar Dynamics NAV upgrades, except for the change in name. This is a convergence point for Dynamics SMB products—going forward, they are all considered customers of Business Central, in the cloud or on-premises, even if they are running differently branded products such as Dynamics SL, Dynamics GP, and older versions of Dynamics NAV.

High productivity user experience

Get more work done with productivity features such as filtering of lists and totals, and copy and paste. With a host of new keyboard shortcuts to accelerate your business tasks, and improved keyboard navigation throughout, Business Central is ready to support the diverse needs of your workforce. Get to your data faster with improved search for pages, reports, and Help documentation.

Business users get a fresh and modern experience in all main screens of Business Central. Whether you are accessing your data from the browser or the Windows 10 desktop app, you will experience a consistently smooth, intuitive, and modern interface as you transition across role centers, lists, worksheets, transaction documents, or details pages (such as the customer card).

Tenant administration

Business Central partners manage the lifecycle of the tenant through the Dynamics 365 Business Central administration center. The administration center is the portal for VARs to engage with customers and manage health, troubleshooting, notifications, and sandboxes of the customer tenant.

Improved Visual Studio Code AL experience

Be more productive when developing and troubleshooting extensions with new and improved developer tools, such as sandbox environments with production data, improved breakpoint support, better inline Help, ability to trace raised events in a given user scenario, support for .NET Interop for on-premises deployments, extension support for enums, report data set and field groups, and more.

Making Business Central available in new markets

Business Central has a combined localization strategy inclusive of both Microsoft-led and partner-led models. We continue to respond to partner-led scenarios and anticipate additional countries being delivered via localization app extensions in Microsoft AppSource. Additionally, Microsoft will also deliver a localized version of Business Central in Iceland, Norway, and Mexico in this release.

See Also

Summary of what's new in Business Central

Summary of what's new in Dynamics 365 Business Central

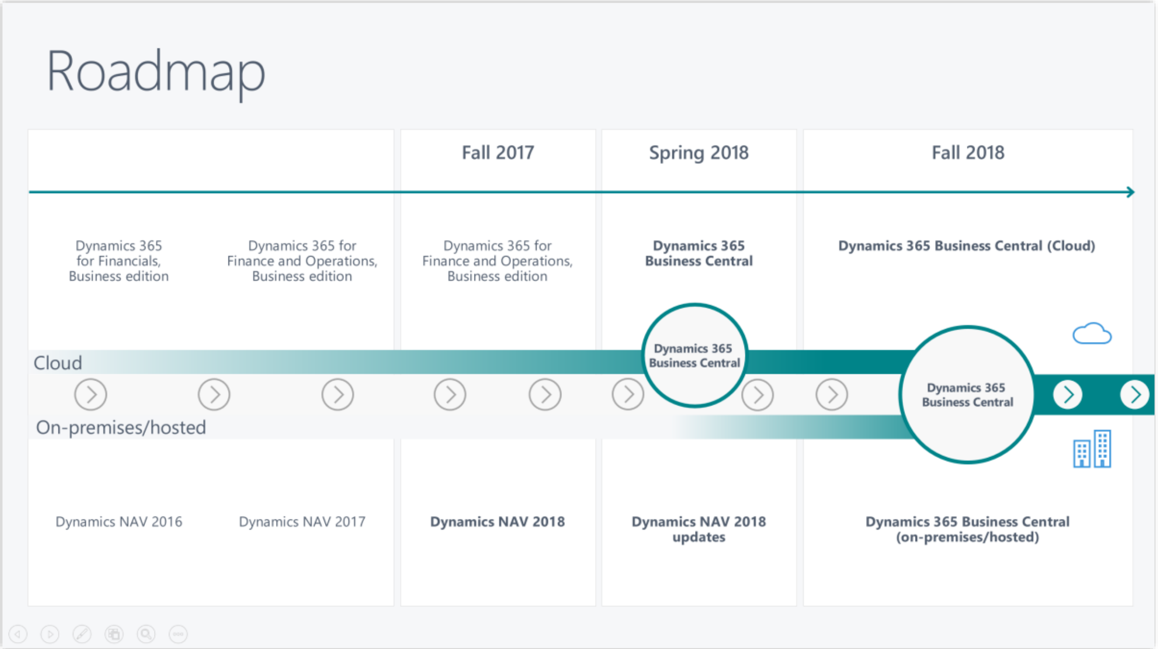
This topic lists the features planned for release in Microsoft Dynamics 365 Business Central between October 2018 and March 2019.

Feature	Release type	Target release month
Productivity features for desktop users	General Availability	October 2018
Accessibility features for desktop users	General Availability	October 2018
Refreshed experience on major desktop screens	General Availability	October 2018
Business Central everywhere	General Availability	October 2018
Combined mobile/companion app for Business Central	General Availability	October 2018
Enhanced Power BI embed experience	General Availability	October 2018
Permission sets are editable	General Availability	October 2018
Tenant administration for VARs	General Availability	October 2018
Improved Visual Studio Code AL experience	General Availability	October 2018
Localization apps and translation apps	General Availability	October 2018
Intelligent edge for Dynamics GP, Dynamics SL, and Dynamics NAV	General Availability	October 2018
Additional productivity features for desktop users		Unscheduled
Refreshed experience on additional desktop screens		Unscheduled

Business Central everywhere

With the October '18 release, Dynamics NAV transitions to Dynamics 365 Business Central on-premises.

Since Dynamics NAV and Dynamics 365 Business Central share the same code base, the transition for customers from Dynamics NAV to Dynamics 365 Business Central is as seamless as just another Dynamics NAV upgrade. Upon upgrading, they receive the new, refreshed, and highly productive user experience of Business Central, and the name of their product changes from Dynamics NAV to **Dynamics 365 Business Central**.



With the October '18 release, we are bringing the Business Central web-based modern productivity features and user experience to the on-premises and hybrid customers upgrading from Dynamics NAV to Dynamics 365 Business Central. Users connecting to on-premises, hybrid, or cloud deployments of Business Central (regardless of how they connect) will all benefit from the same productive and refreshed user interface and features.

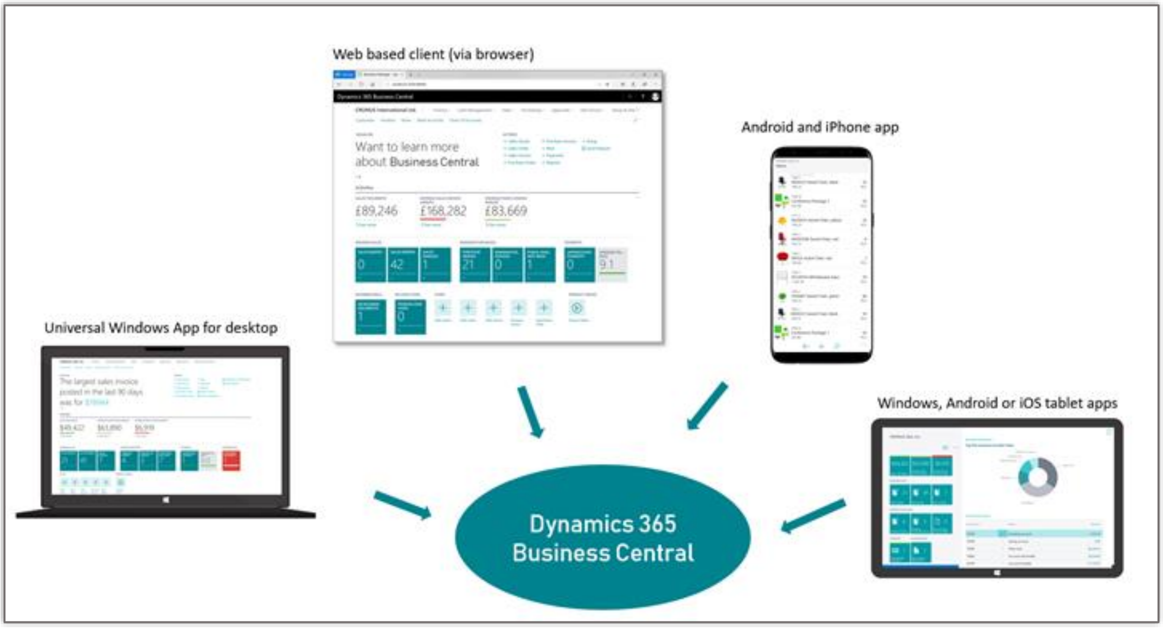
This ensures an easier transition and shorter learning curve for new-employee onboarding—all on top of new capabilities of cloud and AI-powered insights and data analytics for the Business Central customer, especially with cloud and hybrid versions.

The **Dynamics 365 Business Central** universal app is able to connect to cloud, on-premises, and hybrid deployments of Business Central. That app is available for:

- Windows 10 (desktop, tablet, and phone)
- Android (tablet and phone)
- iOS (tablet and phone)

The full desktop mode is supported on computers running Windows 10.

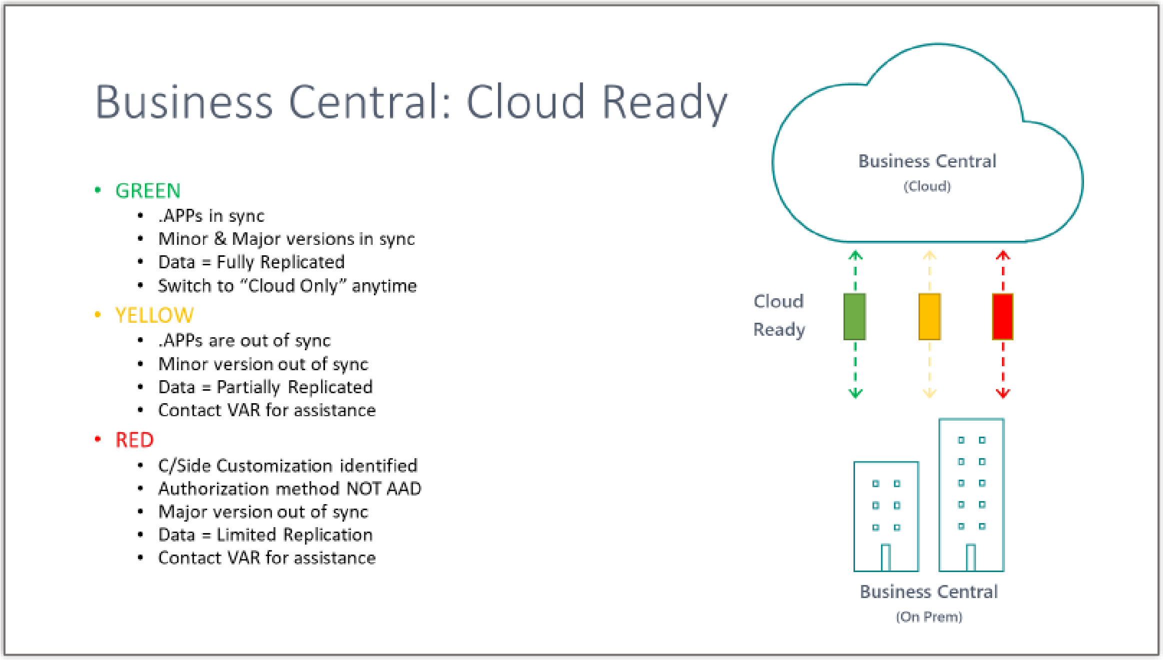
For more information on mobile/companion apps for Business Central, see Getting Business Central on your mobile device.



[!NOTE] The Dynamics NAV app remains available in the app store for customers still working on the Dynamics NAV platform and planning to migrate later to Business Central (on-premises, hybrid, or cloud).

Microsoft Dynamics 365 Business Central hybrid deployment

While Business Central is a cloud-first service, customers who need to run their workloads on-premises or on the intelligent edge connected to the cloud can now do so. With Business Central, once customers sign up for the service in the cloud, they have the option to deploy it locally to their choice of hardware. While they are running Business Central on their own hardware, customers will have a tenant in the cloud, and the data from the customers' hardware will be replicated to the cloud for intelligent cloud scenarios. At all times, customers are informed of their "cloud ready" status, so when they're ready to transition completely to the cloud, it's a simple step.



The customer data is always uploaded to the cloud from on-premises (customers can opt out if desired) to bring the intelligent cloud capabilities to the Business Central deployments on the intelligent edge. Business Central will be licensed through CSP, at the same price, regardless of where the customer (through a partner) deploys their solution.

Partners are still able to customize on-premises solutions through code customization. However, when they do that, they will receive warnings that their solution has become disconnected from the cloud and the intelligent edge. That is, their path to the cloud is disconnected until they refactor their legacy customizations and add-ons into an extension. Upon doing so, Business Central will let them know they are again connected to the cloud and the intelligent edge. Microsoft will continue to support on-premises code customizations; however, we highly recommend that partners refactor their apps and customizations into extensions to benefit from continuous updates and the intelligent cloud and the intelligent edge.

Tell us what you think

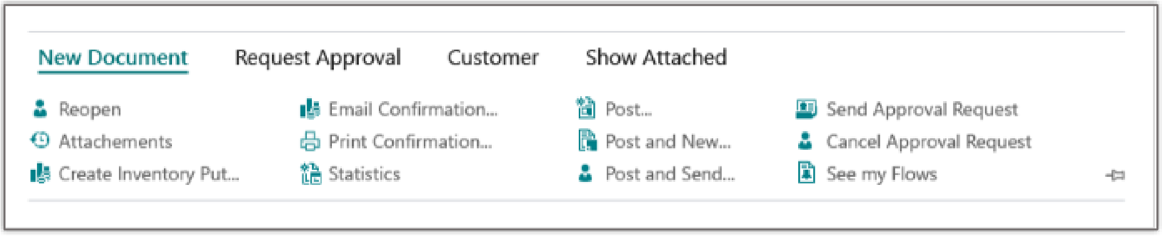
Help us improve Dynamics 365 Business Central by discussing ideas, providing suggestions, and giving feedback. Use the Business Central forum at https://aka.ms/businesscentralfeedback.

High productivity with an all-refreshed desktop experience

In the October '18 release, Microsoft Dynamics 365 Business Central receives a refreshed desktop experience. Business Central accelerates productivity through powerful new features for working with lists and searching for pages and reports.

Refreshed desktop experience

With a fresh new look, Business Central is now easier to use. The refreshed desktop experience focuses on improved layout of data, taking advantage of screen space, better data visibility and readability, and easier navigation through the entire application. Details pages (such as the customer card) also get a new look and feel, completing the visual refresh of all the application areas with further refinements across the application.



New command bar in Business Central

Learn more about the refreshed desktop experience.

Improved productivity in lists

Adding to the features already available for lists, such as showing more columns and personalizing the freeze pane, Business Central now helps you be more productive when filtering, navigating, or entering tabular data. Business Central addresses several commonly requested and powerful features that drive productivity, such as advanced filtering, limit totals, row-based copy and paste, and improved keyboard navigation and shortcuts. Grids have also received an overhaul and are more responsive and scale to more business data. These are individually small features, but collectively they bring a substantial increase in day-to-day productivity for Business Central users. Moving to the cloud does not mean losing productivity.

Learn more about advanced filtering.

Learn more about Copy & Paste.

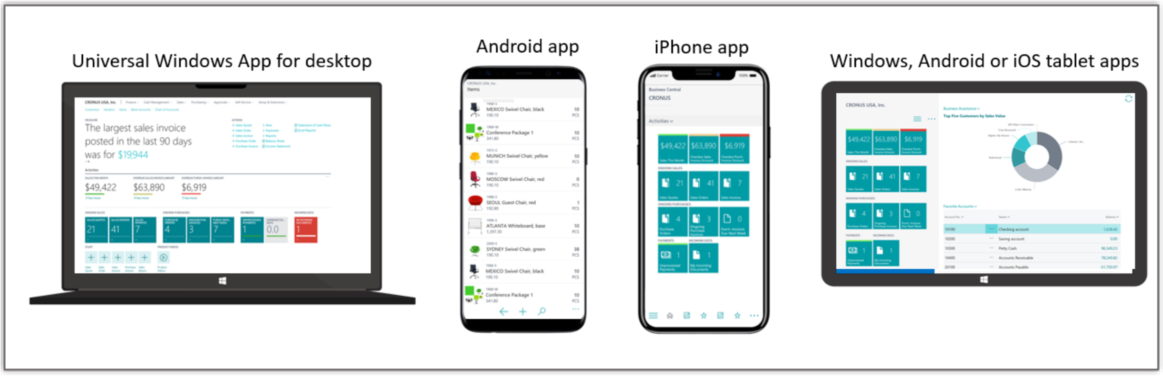
Improved Search

Get to your data faster with improved search for pages, reports, Help documentation, and actions on your current page.

Learn more about improved search.

Access from anywhere

Users of Business Central are able to remain productive and engaged at their desks or on the go, regardless of the device, platform, or form factor (laptop, desktop, tablet, phone).



Dynamics 365 Business Central Everywhere

Business Central is a modern business solution from Microsoft that not only brings the full power and heritage of Dynamics NAV to the cloud but also enables modern businesses to compete much easier in the all-connected world and deliver on digital transformation.

Accessibility

At Microsoft, we believe accessibility is essential to delivering on our mission to empower every person and every organization on the planet to achieve more. With this release of Business Central, the desktop browser experience meets Microsoft accessibility standards, ensuring your diverse workforce has access to business data and the tools necessary to complete business tasks at their desks. With our focus on features for low-vision and low-mobility users, Business Central offers keyboard access to all aspects of the interface, and support for screen readers and high contrasts. Learn more about Microsoft's commitment to accessibility.

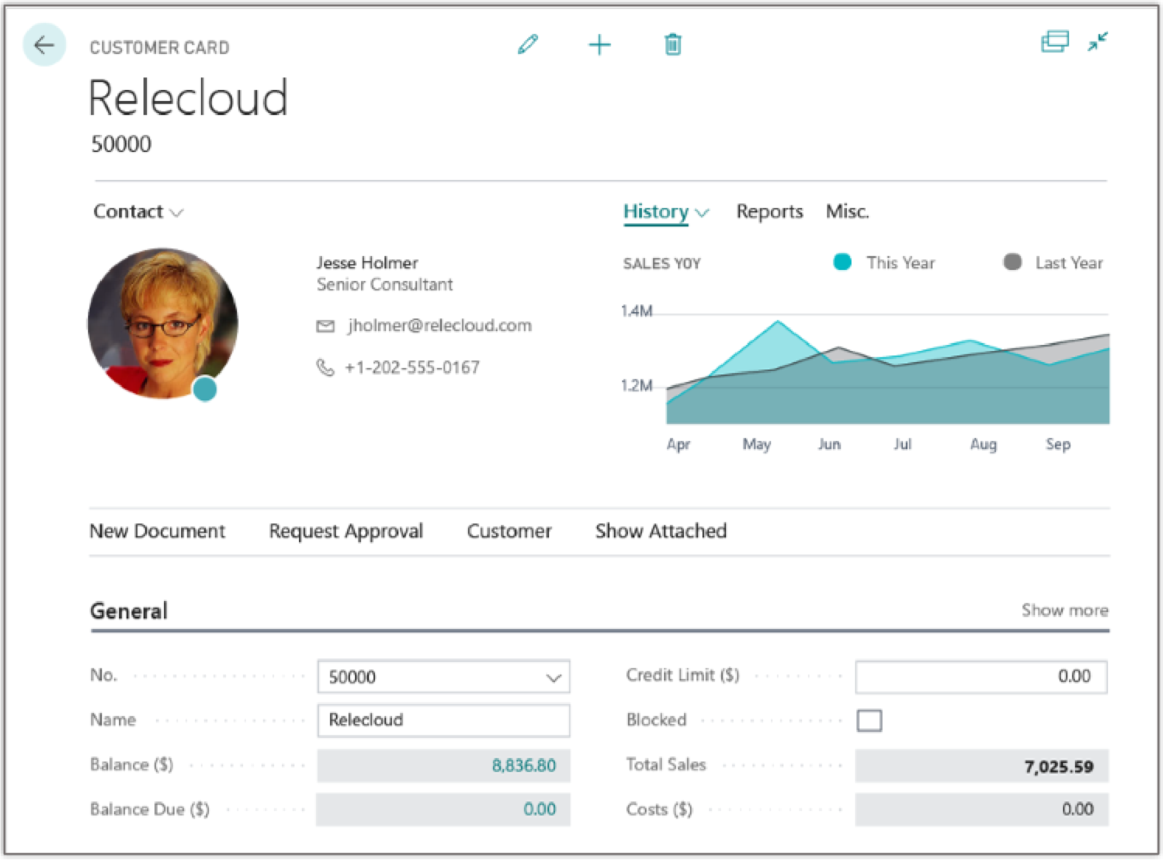
Refreshed desktop experience

A fresh, modern experience makes it easier to adapt Dynamics 365 Business Central to your organization and simplify the learning path for users. Customers get a new, refreshed user experience that helps them become more productive, while Microsoft partners value the ease with which they can now take the product to market and onboard new customers. The refresh does not stop just at the visual side—the application experiences are adjusted, simplified, and improved further.

Our long-term goal is to provide all users with a beautiful, capable, mature, and fast browser experience that helps attract customers and eases the job of demonstrating how to run and grow a business with Dynamics 365 Business Central.

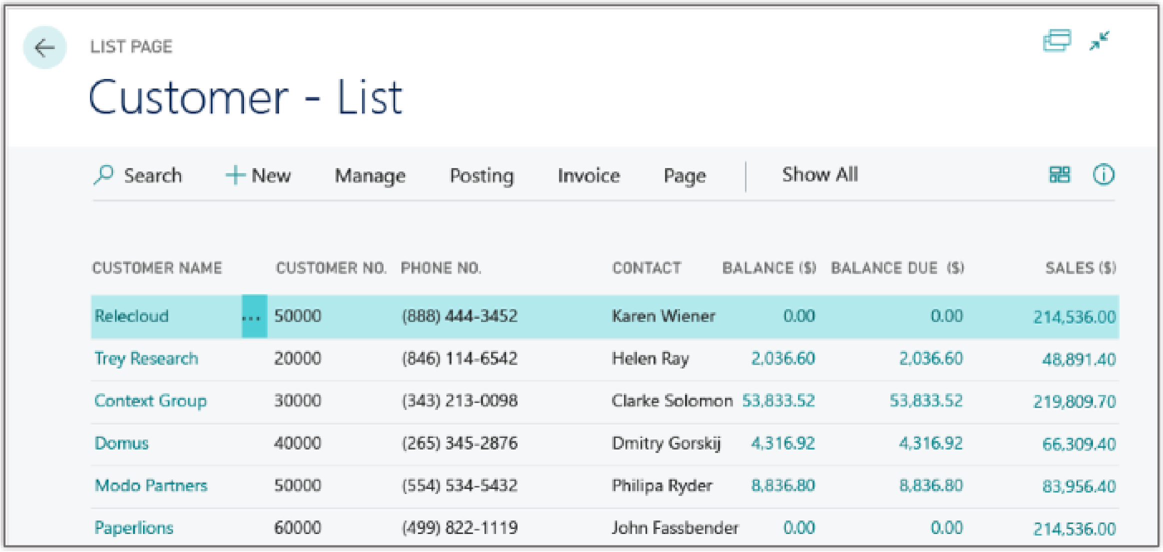
Modern user experience

With the new experience, users get a more streamlined navigation with the back button displayed prominently on the left of the page and with special dynamic system commands occupying the middle section. These elements move the navigation closer to users, allowing them to stay focused on the data and task at hand.



Customer card

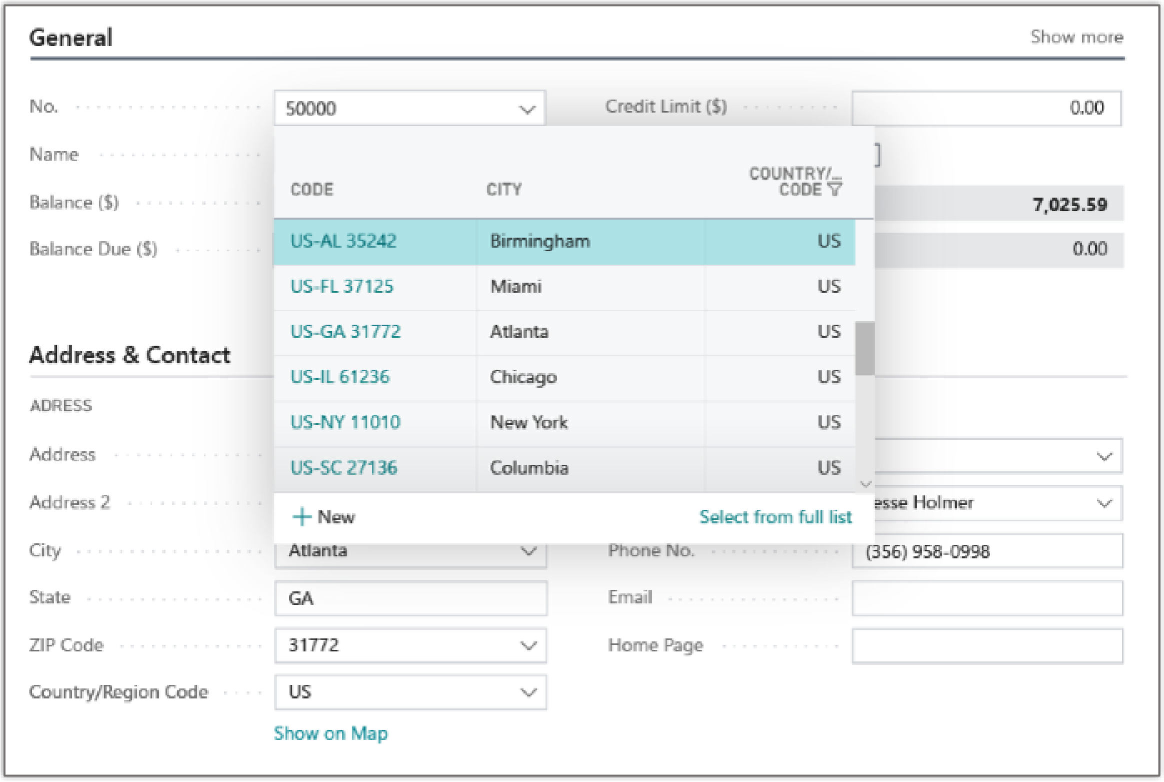
Multiple elements related to lists, lookup windows, and grids have been refreshed to align with the rest of the product and with the aspiration of Business Central to be modern software for the cloud and on-premises.



A list with a new commands bar

With the new command bar, users can now be more productive with larger screen estate devoted to their business data, reducing space used previously for menus and ribbons. Those new elements of the user interface are fully flexible and dynamic - only show features and options that users need at any given time while consuming less space on the screen.

All the lists in the product feature now a new, refreshed layout with more flexible grid customization, tile view available everywhere and with quick access to search and view. This allows users to get better and faster access to the data whenever it is needed.



A list lookup

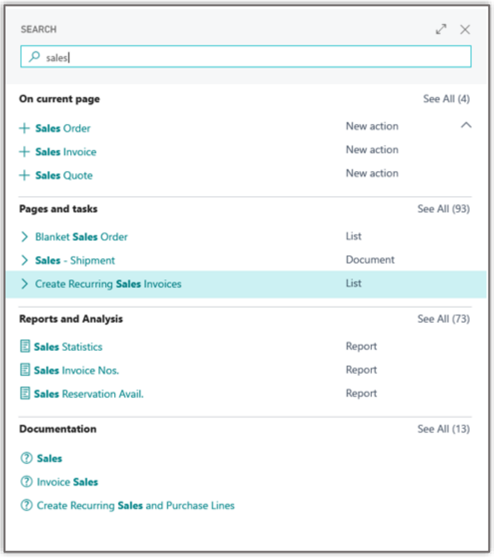
Tell us what you think

Help us improve Dynamics 365 Business Central by discussing ideas, providing suggestions, and giving feedback. Use the Business Central forum at https://aka.ms/businesscentralfeedback.

Improvements to search

Finding your way around Dynamics 365 Business Central just got easier. Productivity increases when people can find what they need, and search is often how people look for things. Therefore, we've broadened the search scope, improved the logic that search uses, and made it easier to determine if the results are relevant.

The **Search** field replaces the **Search for Page or Report** field. You can use it to find objects such as pages and reports, but also to find actions and product documentation. We've also improved the logic behind the search, and search results offer abstracts that clarify each item in the result.



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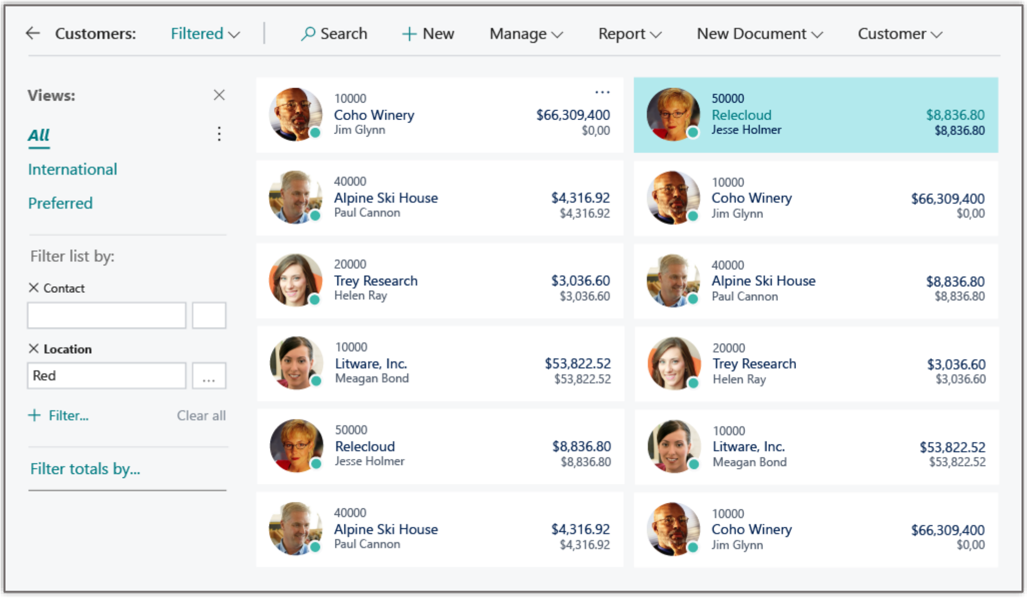
Advanced filtering

Work efficiently in lists in Dynamics 365 Business Central by influencing calculations and applying filters to multiple fields.

Back-office information workers spend significant time working with lists: entering or modifying data, analyzing trends and anomalies, or simply looking for specific records. While a quick search can reduce the list by finding the closest matches across all columns, users often need a higher degree of control as the size of the business database grows. The powerful filtering capabilities in Business Central accelerate list-related tasks by providing absolute control over filtering in a modern and intuitive experience.

Filtering lists

Anchored to the side of your lists, the new filter pane has a familiar design that is easy to learn and efficient to work with. Switch between predefined filtered views of your list, adjust a view by adding your own filters, or simply start from scratch.



The filter pane allows you to: * Get an overview of the currently applied filters, and see if they were set by you, by a filtered view, or by the application itself. * Add as many filtered columns as you like by typing to quickly search for more fields on the source table. * Get assistance with specifying filter values using lookups or the field's data type. * Create complex filters using operators, ranges, variables, and shorthand. * Filter to the current cell value in the list.

Business Central remembers the filters you applied throughout the session as you navigate back and forth across pages. The ability to permanently save your changes as a filtered view will be available at a later date.

The filter pane is available on all pages that display lists, including worksheets, document lines, and list parts. This feature replaces the previous filter window reachable from each column header, and it complements other features that help you find specific rows or analyze your data, such as searching and sorting.

Limit totals

One of the most popular features of Dynamics NAV now makes its way to Business Central. Lists often display aggregated or computed values, such as currency amount totals. With this release, Business Central gives you a whole new level of control through which you can apply filters to one or more dimensions that influence computed values. Use this in combination with filters, sort, and search to explore and analyze your data.

Keyboard shortcuts

Although the filter pane is just a click away, you can also have a mouse-free experience with a variety of keyboard shortcut combinations, including the Alt+F3 shortcut to filter to the current value. You can now create compound filters on the fly without ever leaving the list, using shortcuts to navigate across cells and then filter to the currently focused value or clear the filter on the current column.

Tell us what you think

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Improved grid with copy and paste

Work efficiently in lists in Dynamics 365 Business Central with improved grid scalability and the ability to copy and paste rows.

Back-office information workers spend significant time working with lists: analyzing trends and anomalies or entering and modifying data. As the business database grows, the experience must remain performant and enable users to continue working efficiently. Repetitive data entry tasks can be greatly accelerated by copying data entered earlier, and users expect industry-standard keyboard shortcuts such as Ctrl+C to help achieve that level of productivity. Being able to copy data to the clipboard also facilitates moving data across software boundaries, such as pasting a list of discounted items into an email to a customer.

Improved grid

We've rewritten how lists are displayed and how they fetch data, allowing grids to scale to more rows and more columns. This improves the overall snappiness of navigating across grid cells. Preloading rows more frequently makes for a seamless scrolling experience. Users can now scroll to any position in the list using the keyboard or scroll bar, and the data in view will display immediately.

Copy and paste

This enables you to:

- Copy one or more rows in a list and paste them to the same (or similar) list.
- Copy one or more rows and paste them into Microsoft Excel, including the column captions. Not using Excel? Most applications such as Microsoft Outlook allow pasting tabular content where the column captions will be displayed.
- Copy one or more rows from Excel and paste them into DBusiness Central.

Keyboard shortcuts

Apart from the industry-standard shortcuts Ctrl+C and Ctrl+V, we've added the highly requested F8 shortcut that copies the cell above. You can rapidly fill in a new row by tabbing across cells and selecting F8 on the cells where you want to copy the value from the row above.

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Enhanced Power BI embed experience

Enhancements to the current Power BI embed experience include an automatic deployment of Power BI reports, default report selection, and the ability to manage their Power BI reports without ever requiring them to leave Business Central.

End users can customize the embedded Power BI reports as part of their Business Central home page.

Power BI reports will be automatically be deployed and selected when you sign in the first time. Once visible in Business Central, users can make edits to their Power BI reports from a new page in Business Central that surfaces all the controls from Power BI that you can use to modify the reports.

Tell us what you think

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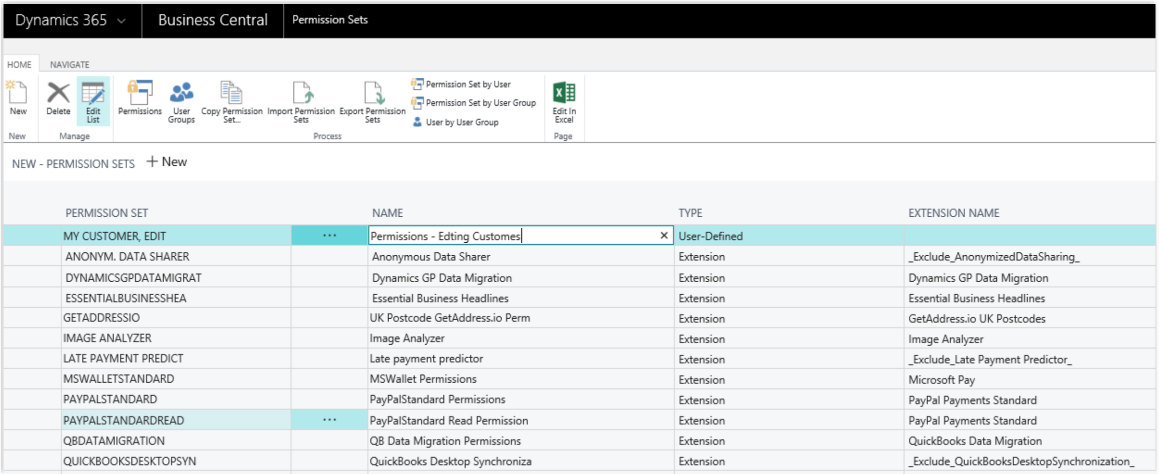
Permission sets are editable

Customers often have their own definitions of what people should be able to do in Business Central, and those definitions do not always align with our predefined permission sets. To address that, we've made permission sets editable so that you can add, delete, and modify them.

End users can customize the permission sets and give them a structure that meets the specific needs of their business.

From the list of permission sets, you can easily add new and copy an existing permission set. If you copy an existing permission set, you can choose to be notified if the original permission set changes.



Additionally, you can now import files with permission sets definitions, such as files provided by a partner or copied from another company, or use RapidStart to add permission sets.

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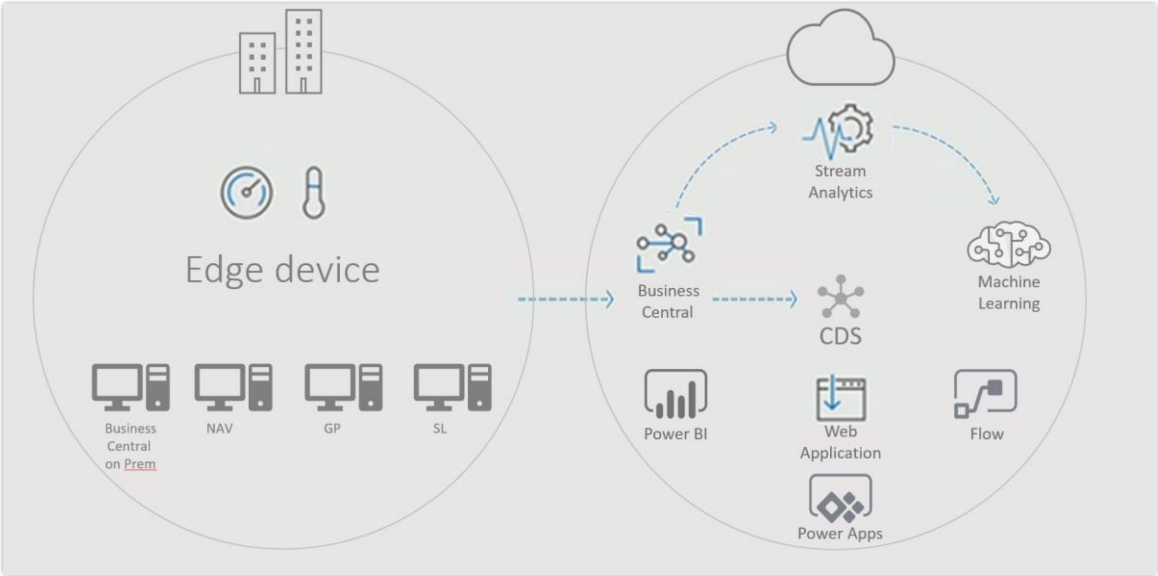
Intelligent edge for Dynamics GP, Dynamics SL, and Dynamics NAV

Microsoft continues to invest heavily in the intelligent cloud, bringing business intelligence, artificial intelligence, machine learning, and numerous other cloud productivity and analytics tools to the marketplace. Customers using on-premises solutions haven't been able to easily take advantage of these services.

Connect your on-premises Dynamics SMB solution to the intelligent cloud through Dynamics 365 Business Central, and get access to Power BI, Microsoft Flow, PowerApps, machine learning, and others.



With the October '18 release of Business Central, we're bring the intelligent edge to several of our Dynamics SMB products. With the intelligent edge, you can seamlessly connect your on-premises solution to an instance of our intelligent cloud through Business Central. When the connection is made, we securely replicate your on-premises data to the intelligent cloud. You simply decide which companies you want to replicate (all if you choose), and then, within the main pages of your on-premises solution, we'll deliver back actionable analysis and content. The intelligent cloud leverages solutions such as Power BI, PowerApps, Flow, and AI to provide insight and actionable messages enabling your business to run even better.

Initial releases will target Dynamics 365 Business Central, Dynamics GP, and Dynamics SL, with legacy Dynamics NAV following shortly thereafter. Dynamics GP and Dynamics SL will continue to receive product improvements and updates, including value added through the intelligent cloud. When you want to move to a fully cloud enabled solution, your data is available in Business Central through migration tools. These migration tools are available within Business Central and AppSource, as well as services through a number of partners that specialize in upgrading customers to Business Central. You can find these partners and further information via AppSource Consulting Services.

Tell us what you think

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Tenant administration for VARs

Dynamics 365 Business Central VARs can manage the lifecycle of their customers' solutions through administration pages.

The administration center is the portal for VARs to engage with customers and manage health, troubleshooting, notifications, and sandboxes of the customer tenants. With this administration center, partners can manage the lifecycle of their customers' Business Central tenants, including specifying upgrade windows.

The administration center provides a centralized view of the customer's solution and its lifecycle, where the VAR can take action to manage customer upgrades and troubleshoot customer issues. VARs will be notified of lifecycle events impacting their customers, to which the VARs can view and take action for one or more of their customers from within the administration center. VARs will set an upgrade window, meaning a time period during which an upgrade can take place, for each customer. The VAR can view errors and other telemetry for the customer in the administration center, using this information along with enhancements in creating a sandbox of the customers environment to troubleshoot any issues the customer is experiencing. The sandbox environment will also be a good place for the VAR and the customer to test out new customizations or ISV add-ons.

Tell us what you think

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Improved Visual Studio Code AL experience

Creating extensions is the way to customize Business Central. The October '18 release adds productivity enhancements to the development experience as well as support for additional extension scenarios.

With the enhancements to the tooling and extension capabilities, developers can be more productive when developing and troubleshooting solutions, and will have more options to meet customers' customization requirements using extensions.

Sandbox with production data

A common scenario when working with sandboxes, especially when testing or troubleshooting, is the wish to have production data available. With this release, we add the ability to create a sandbox based on a copy of the latest cloud backup of the production data. To minimize cross-talk with integrations set up in the production data, these integrations will be disabled when the sandbox is created. Using caution, admin users can enable or reconfigure these integrations as required to support the intended sandbox use.

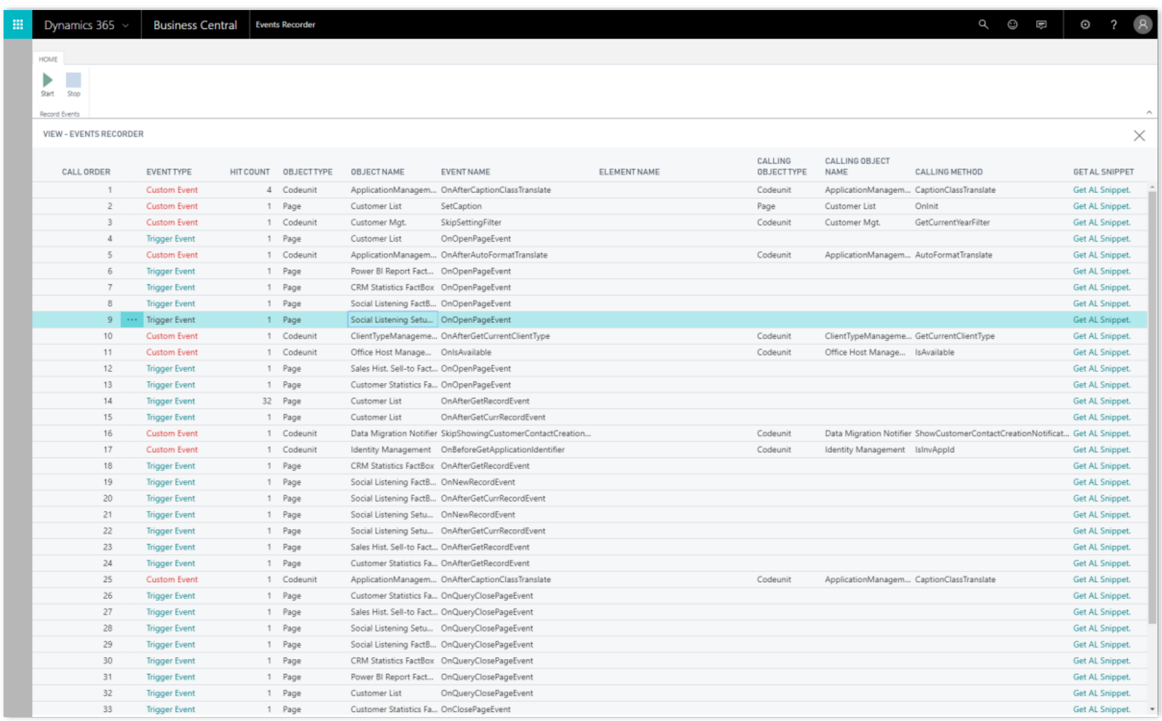
New object extensions

You can now extend the following:

- Enums (options) from the base application as well as create new, extensible enums in your extensions.
- Report data sets in extensions. Report data layouts are still a replacement story.
- Field groups.

Event discoverability

A core aspect of creating extensions is to subscribe to events. However, a common challenge is understanding which events are available in a given user flow. Debugging can help, but will only show events already being subscribed to. To aid in the discoverability of events and extension points, there is a new event tracer in the client. With this, a user flow can be recorded to list events that are raised, and the developer can have subscriber code for the event generated for easy copy into AL code.



Event tracer

Furthermore, a large number of new events has been added, making it possible to extend in more places.

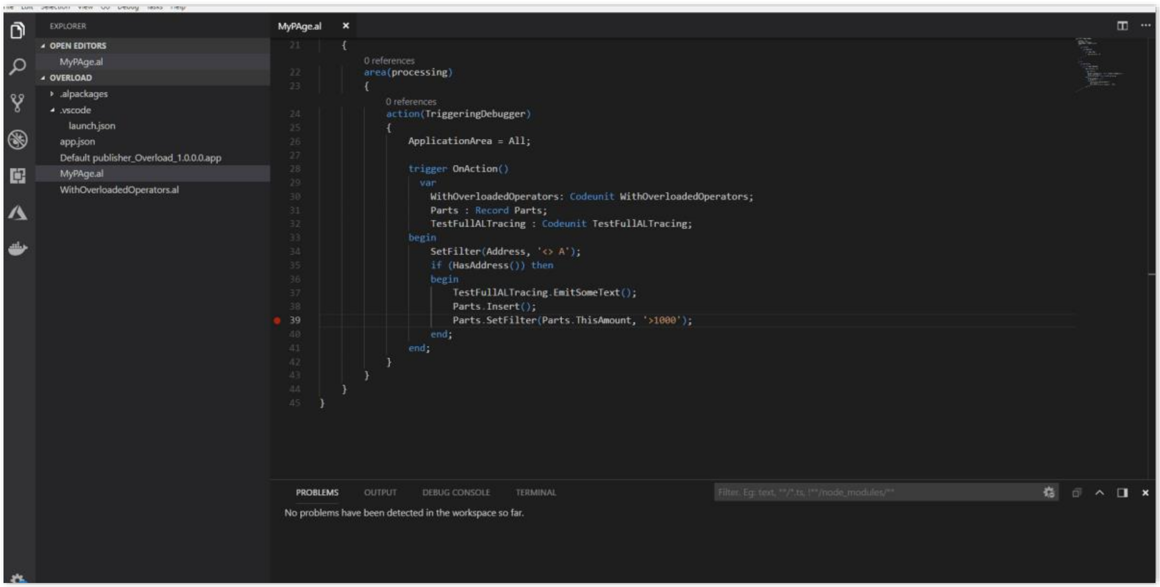
Visual Studio Code AL Extension enhancements

With versioning check and backward compatibility, you can now install the AL Language extension from the Visual Studio Code marketplace and use it to develop solutions for many different platforms, including cloud sandboxes, Business Central April 2018 release, Business Central October 2018 release, and future versions. The compiler will check that the connected tenant is compatible, and compile against the target platform as set in the new app.json property.

Also, the AL extension is now faster and more responsive when working with larger projects containing many object extensions/files.

Debugger enhancements

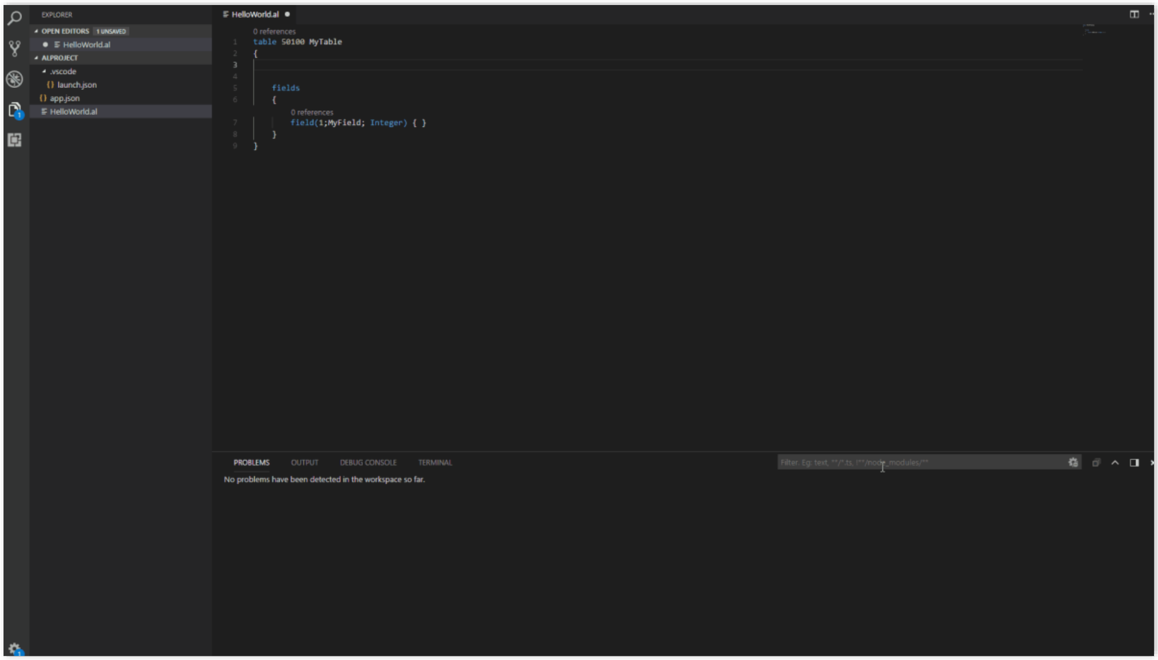
Just like in the legacy Dynamics NAV debugger, you can now use the common Break on Error, as well as Break on Write. You can also go to definition in the base application code and set breakpoints there.



F12 Go to Definition for base application code

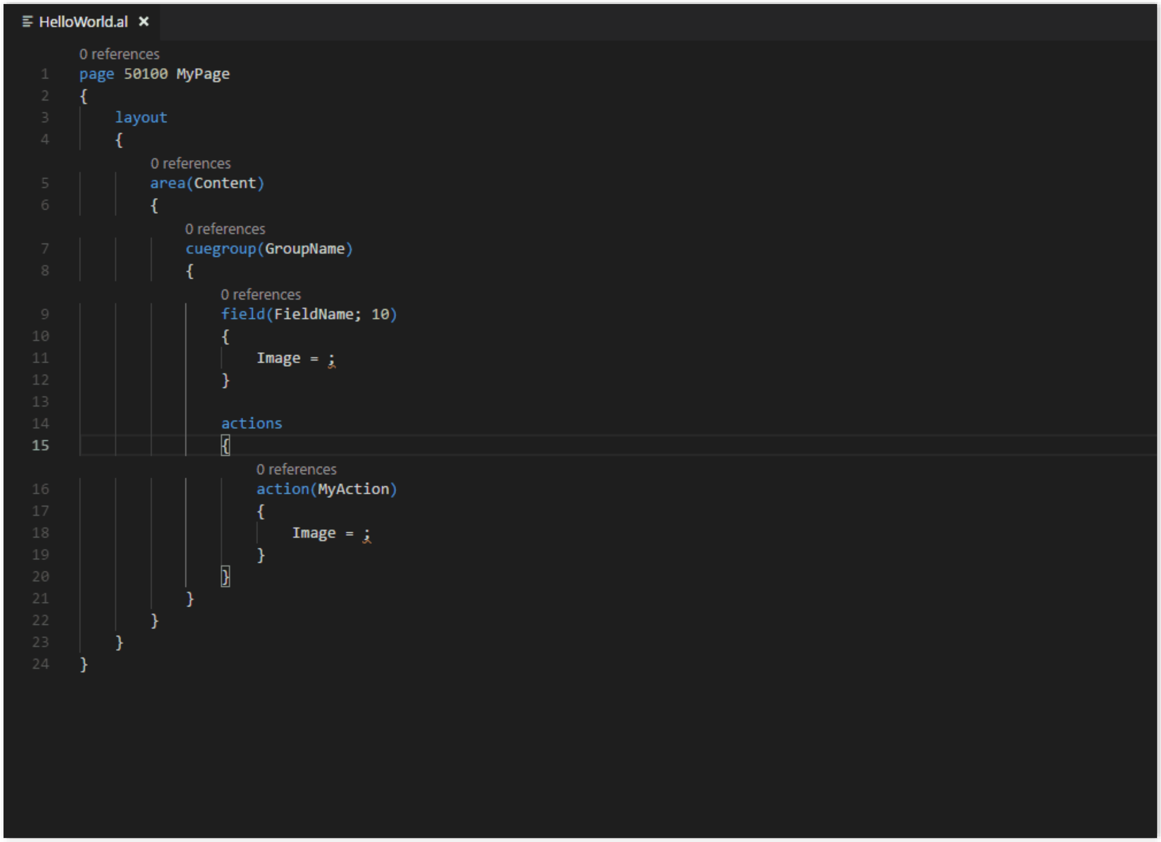
IntelliSense enhancements

All properties in AL, both on hover and in IntelliSense, now have Help links that redirect you to the related online documentation. Furthermore, the documentation for AL language constructs is autogenerated and used for both online reference documentation and IntelliSense, ensuring up-to-date and aligned documentation.



Help link from IntelliSense

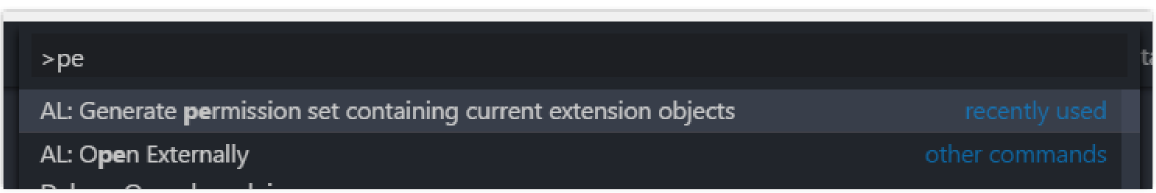
Suggestions for Image properties in an extension now only propose the ones that can be used in the current context, displaying a warning for images that cannot be used in the current context, and you can preview images when using IntelliSense and on-hover.



Select and preview images with IntelliSense

Working with permissions

To make working with permissions easier, it is now possible to export permission sets from the application, using the client, and import these into the Visual Studio Code AL Extension. New permission files for the objects in an extension can also be generated from within the Visual Studio Code AL project.



Visual Studio Code AL command for generating permissions file for extension objects

.NET Interop

When working with Business Central solutions that target on-premises deployments, you can now add .NET Interop in AL code. Note that this implies that the solution cannot be moved to the cloud later without replacing the .NET Interop.

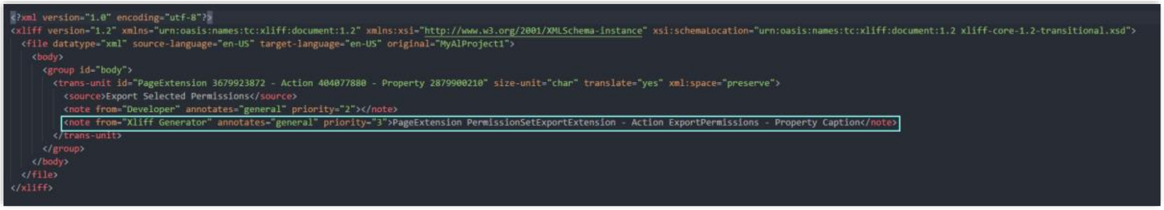
```
dotnet
{
    assembly(mscorlib)
    {
        type("System.DateTime"; DotNetDateTime) { }
    }
}

pageextension 50000 CustomerListExtension extends "Customer List"
{
    trigger OnOpenPage()
    var
        d: DotNet DotNetDateTime;
    begin
        Message('The current date is: ' + d.Now().ToString());
    end;
}
```

.NET Interop in on-premises AL

Translation enhancements

New contextual information that describes which object and element a given string applies to has been added to the generated XLIFF translation files. This helps translators get a better overview of where a string is displayed in the UI, thereby increasing the quality of the translation.



```
<?xml version="1.0" encoding="utf-8"?>
<xliff version="1.2" xmlns="urn:oasis:names:tc:xliff:document:1.2" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="urn:oasis:names:tc:xliff:document:1.2 xliff-core-1.2-transitional.xsd">
  <file datatype="xml" source-language="en-US" target-language="en-US" original="MyAlProject1">
    <body>
      <group id="body">
        <trans-unit id="PageExtension 3679923872 - Action 404077880 - Property 2879900210" size-unit="char" translate="yes" xml:space="preserve">
          <source>Export Selected Permissions</source>
          <note from="Developer" annotates="general" priority="2"></note>
          <note from="Xliff Generator" annotates="general" priority="3">PageExtension PermissionSetExportExtension - Action ExportPermissions - Property Caption</note>
        </trans-unit>
      </group>
    </body>
  </file>
</xliff>
```

XLIFF translation file note tag

OData-bound actions in AL

It is now possible to declare OData bound actions in AL. A new attribute and a new AL type have been introduced to achieve this.

```
[ServiceEnabled]
procedure CreateCustomerCopy(var actionContext : WebServiceActionContext)
var
createdCustomerGuid : Guid;
customer : Record Customer;
begin
actionContext.SetObjectType(ObjectType::Page);
actionContext.SetObjectId(Pages::Customer);
actionContext.AddEntityKey(customer.fieldNo(Id), createdCustomerGuid);
actionContext.SetResultCode(WebServiceActionResultCode::Created);
end;
```

Tell us what you think

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Making Business Central available in new markets

Business Central has a combined localization strategy inclusive of both Microsoft-led and partner-led models. We continue to respond to partner-led scenarios and anticipate additional countries being delivered via localization app extensions in Microsoft AppSource. Additionally, in this release Microsoft also delivers a localized version of Business Central in the following markets:

- Iceland
- Norway
- Mexico

There is an interest in Business Central in countries that the Microsoft-led localization model does not cover. Often the interest is due to international companies running their worldwide operation on Business Central. By enabling partner-led localizations for Business Central, through localization and translation apps, partners can continue to serve customers throughout the world.

Localization of Business Central using localization and translation apps

Partners interested in providing Business Central localizations in markets that Microsoft does not cover will be able to do so by developing localization and translation apps on top of the international (W1) version of Business Central.

The process, requirements, scope, guidance, and resources for developing localization apps can be found at aka.ms/businesscentrallocapps.

For a list of currently supported markets, see the International availability of Microsoft Dynamics 365 deck and the Local Functionality landing page in the Business Central docs.

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Mixed reality business apps

Overview of Microsoft Layout October '18 release

Microsoft Layout lets you bring space designs from concept to completion with confidence and speed. Use a HoloLens or Windows Mixed Reality immersive headset to easily create room layouts in a real-world space. Import 3D models and experience designs as high-quality holograms. Edit and review with stakeholders in real time.

Multiple industries, including manufacturing, professional services, and retail, have needs for space planning. A variety of space planning tools today fill these needs, ranging from extremely complex CAD software to 2D visualization software to analog solutions such as building out in cardboard and foamcore. Each has its drawbacks. CAD programs offer a high degree of fidelity, but are difficult for non-experts to understand. 2D drawings often don't tell a complete story of what a space will truly look or feel like in real life, and cardboard and foamcore are messy and expensive.

Microsoft Layout allows space planners to quickly lay out their spaces with imported or graybox assets and view high-quality holograms overlaid on their real world with HoloLens or in a virtual representation of their space in Windows Mixed Reality. Microsoft Layout also lets space planners share their designs easily with stakeholders through videos, photos, and screen sharing.

Define your space:

- Scan your space with HoloLens to create a new room layout.
- Or, create a basic floor plan in Visio and import it into HoloLens or Windows Mixed Reality.

Import 3D models:

- Use the Import Tool for Microsoft Layout to prepare your custom 3D models. The tool uploads your models in FBX, OBJ, SKP, STP, JT, and glTF formats to our Simplygon service, converts them to GLB, decimates them if necessary for improved on-device performance, and adds necessary metadata.
- Or, use our library of common manufacturing, office, and graybox assets to plan your space.

Design your space:

- Place your custom or our inbox assets into your space.
- Resize, rotate, move, duplicate, or delete assets as necessary.
- Save your layout.
- Reload layouts and realign layout to your room if necessary.

Review with stakeholders:

- Use Cortana to take a picture or create a video.
- On HoloLens, use Microsoft Remote Assist to stream what the HoloLens user is seeing.
- In Windows Mixed Reality, use VR Screen Sharing to see what the VR user is seeing.

Export your design:

- Export your space to a 3D glTF for viewing on a PC (in Windows Mixed Reality Viewer, for example).

Important links

Build 2018 Microsoft Layout preview launch video

Set up and use Microsoft Layout

How-to Videos for Microsoft Layout

Microsoft Layout FAQ

Overview of Microsoft Remote Assist October '18 release

Microsoft Remote Assist lets you connect and collaborate with heads-up, hands-free video calling, image sharing, and mixed reality annotations. First-line workers use HoloLens to share what they see with any expert on Microsoft Teams, while staying hands on to solve problems and complete tasks together, faster. Backed by enterprise-level security, Microsoft Remote Assist enables communication with peace of mind.

May '18 – Public Preview

The Public Preview is the first shipped version of Microsoft Remote Assist. Free and publicly available, it's the core Remote Assist experience on HoloLens we will expand upon in the future.

On HoloLens:

Make and receive calls.

- Start a video call with an expert on Microsoft Teams video.
- Receive a video call from an expert using Microsoft Teams.
- Pin your video card or have it follow you around as you move during a call.

Collaborate and annotate.

- Place arrows, draw and insert images into your space during a call.
- Change the color of your arrows and ink.
- View arrows, drawings, and images from the remote expert using Microsoft Teams desktop.
- Erase or undo your annotations at any time during a call.

Get Assistance in another HoloLens application video.

- During a Remote Assist call, use the bloom gesture to leave the Remote Assist app and launch another HoloLens app.
- Share your view of the other application and get assistance.

In Microsoft Teams on a PC desktop:

- Make calls to and receive calls from someone using Remote Assist on a HoloLens.
- Insert arrows, drawings, and images from your desktop into the Remote Assist user's world.
- Erase and undo annotations you inserted.
- Share your screen and present information to the HoloLens user.

Important links

Get and Deploy Microsoft Remote Assist

Microsoft Remote Assist FAQ

Set up and use Microsoft Remote Assist

How-to Tutorial Videos

PowerApps

Overview of Microsoft PowerApps October '18 release

PowerApps is a service that lets you build business apps that run in a browser or on a phone or tablet, and no coding experience is required. Use PowerApps documentation to get expert information and answers to address your needs, regardless of how you use PowerApps.

The October '18 release provides major improvements for all four types of platform users:

- App makers
- App consumers
- Admins
- ISVs

Continued innovation for app makers

Following up on the April 2018 release, the creation experience for model and canvas apps, as well as the Common Data Service for Apps, received significant updates. These updates enable a broad set of use cases for productivity apps through Office 365, in addition to deep business app customization and creation with Dynamics 365.

PowerApps Platform provides fast, consistent user experience

PowerApps is an enterprise-ready platform providing end users with fast, reliable, and consistent user experiences across web and mobile devices.

Customers of Dynamics 365 for Sales, Customer Service, Field Service, and Project Service, as well as IT and ISV apps, can now use the Unified Interface for adaptable, performant, and responsive experiences that provide all the functionality they need. A unified mobile player also provides a single place to find and launch model and canvas applications built by Microsoft, ISVs, and IT departments.

Enterprise-grade platform for administrators

PowerApps makes maintaining and managing apps across your organization easier than ever before. With the launch of the new Admin Center, admins and partners are embracing the more reliable, unified experience to manage storage capacity, environments, and deployments. Admins are more successful resolving issues via the integrated Help & Support experience in the admin center, and the number of issues that are resolved within a day of escalation to customer support has tripled.

Emerging ecosystem of ISVs on the platform

PowerApps and the Common Data Service for Apps have a growing ecosystem of applications from Microsoft, and other software vendors build atop the platform and store data natively in the Common Data Service. The growing set of applications benefits from increased capabilities that make it possible to build world-class SaaS applications on the platform.

Summary of what's new in Microsoft PowerApps

Capabilities for app creators

Anyone who builds a canvas or model-driven app now has more capabilities.

Feature	Release type	Target release month
Improved help for Access users	General Availability	October 2018
Opting into new features	General Availability	October 2018
Improved PowerApps authoring for makers of all abilities	General Availability	October 2018
Inline help for creating accessible apps	General Availability	October 2018
Extend Dynamics 365 entity forms with embedded canvas apps	General Availability	October 2018
Deeper PowerApps integration in Power BI	General Availability	October 2018
Create Power BI reports using data in the Common Data Service for Apps	General Availability	October 2018
Embed applications on SharePoint pages using a PowerApps web part	General Availability	October 2018
Choose your own size of app	General Availability	October 2018
Create canvas apps with responsive layout	General Availability	October 2018
Improved default themes help embedded apps look like they belong in SharePoint	General Availability	October 2018
Enhanced SharePoint forms functionality	General Availability	October 2018
PowerApps makers can create mashup apps with SharePoint Document Libraries	General Availability	October 2018

Feature	Release type	Target release month
Rich Text Editor and HTML view controls for canvas apps	General Availability	October 2018
Easier to configure cascading dropdowns and conditional field visibility	General Availability	October 2018
Simplified gallery, form, and data table field selection and binding	General Availability	October 2018
Easier to find and work with solutions from PowerApps	General Availability	October 2018
Improve ALM for canvas app with solutions	General Availability	October 2018
Sharing enhancements	General Availability	October 2018
Native support for Common Data Service data types in canvas apps	General Availability	October 2018
Easy to work with many-to-one relationships in canvas apps for the Common Data Service	General Availability	October 2018
Catch, handle, and report errors and write Null values to databases with canvas apps	General Availability	October 2018
Work with friendly display names in canvas apps when using the Common Data Service or SharePoint	General Availability	October 2018
Additional enhancements added to the formula bar	General Availability	October 2018
Errors more discoverable by app makers	General Availability	October 2018
Faster load times with parallel data loading in canvas apps	General Availability	October 2018
Formula formatting easier to read	General Availability	October 2018
Advanced relationships on entities	General Availability	October 2018
Simplified lookup field creation on entities	General Availability	October 2018
Create automatic number sequences	General Availability	October 2018
Create and edit entities in PowerApps Studio while you build an app	General Availability	October 2018
Simplified management of advanced entity properties	General Availability	October 2018

Feature	Release type	Target release month
Create and view related flows from your entity	General Availability	October 2018
Configure dependent option sets	General Availability	October 2018
Dependent option sets on Unified Interface	General Availability	October 2018
Power BI Embedding available in Common Data Service entity forms	General Availability	October 2018
Support for custom messages	General Availability	October 2018
Improved experience for building model-driven apps	General Availability	October 2018
New model-driven form designer preview	General Availability	October 2018
Model-driven view designer enhancements	General Availability	October 2018

Improvements in end-user experiences

We have doubled-down on providing high-quality end-user experiences.

Feature	Release type	Target release month
Improved app discovery for app consumers	General Availability	October 2018
Improved speed of apps	General Availability	October 2018
Model-driven mobile applications are more reliable	General Availability	October 2018
Faster loading model-driven apps	General Availability	October 2018
Improved reliability of offline experience for canvas apps	General Availability	October 2018
PowerApps forms in SharePoint are faster	General Availability	October 2018
Build model-driven apps of higher quality with Solution checker	General Availability	October 2018
Dynamics 365 mobile support email login	General Availability	October 2018
Reporting Services Reports in Dynamics 365 are now accessible	General Availability	October 2018
Additional entities added to the Unified Interface	General Availability	October 2018

Feature	Release type	Target release month
Unified Interface form optimizations	General Availability	October 2018
Enhancements to personal dashboards in Common Data Service	General Availability	October 2018
Enhancements to personal charts in Common Data Service	General Availability	October 2018
System chart improvements in Common Data Service	General Availability	October 2018
Filtering data on grids coming to Unified Interface	General Availability	October 2018
Access team on Unified Interface	General Availability	October 2018
Enhancements to Roll-up Views in Common Data Service	General Availability	October 2018
More reliable Outlook Client v8.2 for Common Data Service	General Availability	October 2018
More reliable Outlook Client v9.0 for Common Data Service	General Availability	October 2018
Set Regarding lookup enhancements in Common Data Service	General Availability	October 2018
Support for delegate users in Common Data Service	General Availability	October 2018
Sync specific appointments to Exchange	General Availability	October 2018
Increased performance for globally distributed Common Data Service enterprises	General Availability	October 2018

Better platform for administrators

Admin experiences are key to the adoption of any trusted platform.

Feature	Release type	Target release month
PowerApps supports Intune	General Availability	October 2018
Control availability of user experiences on Unified Interface	General Availability	October 2018
Admin experiences available from Unified Interface	General Availability	October 2018
Enhanced Service Health page	General Availability	October 2018

Feature	Release type	Target release month
PowerApps audit events	General Availability	October 2018
Enhanced help & support for admins	General Availability	October 2018
Unified environment administration	General Availability	October 2018
New Admin analytics reports	General Availability	October 2018

Capabilities for app creators

Following up on the April 2018 release, the creation experience for model-driven and canvas apps, as well as Common Data Service for Apps, received significant updates. These updates enable a broad set of use cases for productivity apps through Office 365, in addition to deep business-app customization and creation with Dynamics 365.

Improved help for Access users

Access users can learn how to use PowerApps for building mobile and web apps that connect to more than 200 data sources. These users can receive relevant email content to stay up to date with PowerApps innovations, as well as getting access to white papers, case studies, and sample apps for understanding the combined capabilities of Access and PowerApps.

Opting into new features

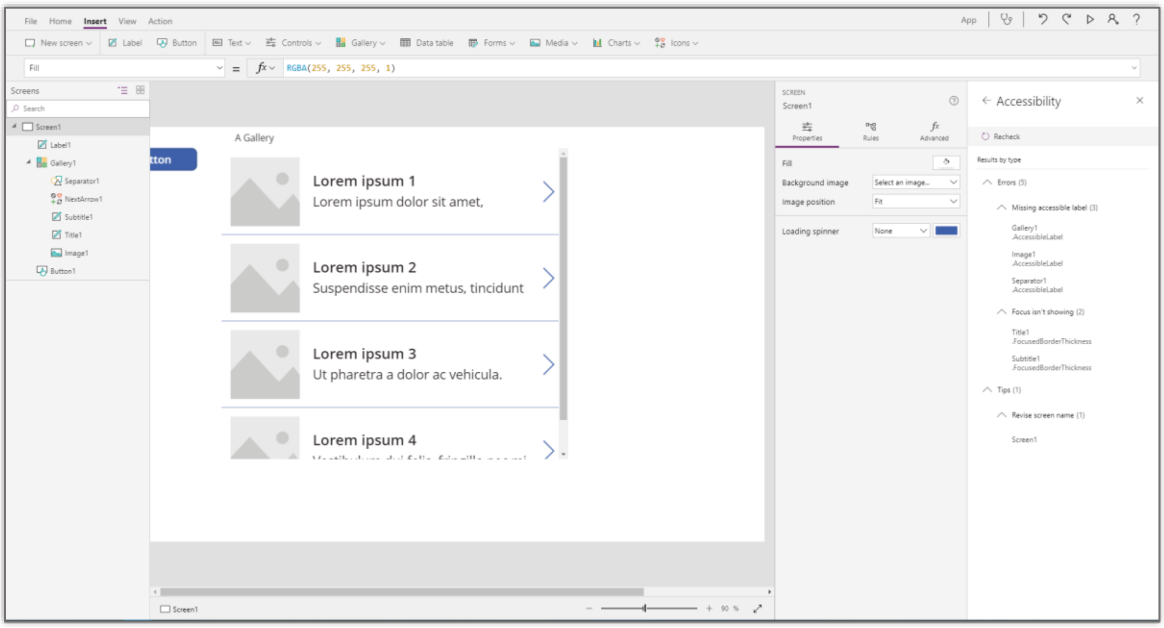
App makers can choose to opt into new features in their current apps when they are ready. New features are available for a limited time before the features are auto-enabled in all apps. This allows app makers to try out the features in existing apps and make any changes needed before they are rolled out globally. New apps created will take advantage of any new feature available.

Improved PowerApps authoring for makers of all abilities

Inline authoring experiences on PowerApps.com comply with the Microsoft Accessibility Standards, which helps more people create apps and helps all makers create apps more efficiently.

Inline help for creating accessible apps

The accessibility checker guides makers to create accessible apps by providing a list of detected issues related to screen-reader capabilities and keyboard navigation items. For each issue, you can navigate to the affected property, get information about how to fix it, and find links to extra resources. Each app maker can review documentation that explains best practices, provides extra information about how to check for color contrast issues, and use the accessibility checker.



Accessibility checker

Extend Dynamics 365 entity forms with embedded canvas apps

Canvas apps enable app makers to deliver a rich, pixel-perfect user experience via low-code customization capabilities. They also support connecting to more than 200 data sources including a range of cloud services (such as Office 365 and SharePoint) as well as on-premises data sources (via a gateway). Now app makers can bring these capabilities directly into their model-driven apps by embedding canvas apps in their model-driven forms.

App makers can embed canvas apps in their model-driven forms just like they add custom controls. Model-driven forms can also pass data context of the current record, a related record or a set of related records to an embedded canvas app empowering app makers to create rich, contextual sections, grids and other components, and visualizations that display data from Common Data Service for Apps and a wide array of external data sources.

Deeper PowerApps integration in Power BI

BI creators can consume PowerApps within their Power BI reports in production solutions. Report creators can refresh their Power BI reports from PowerApps, unlocking many more ways to work transactionally with their data warehouses within reports. BI creators also have simplified sharing options with their apps and reports.

Create Power BI reports using data in Common Data Service for Apps

Power BI offers an extremely powerful tool for visualizing and reporting data. With the connector for Power BI, app makers can connect directly to their environment, navigate relationships, and build compelling reports and dashboards against their data.

Embed applications on SharePoint pages using a PowerApps web part

Content creators within SharePoint can leverage PowerApps within their pages using a PowerApps web part, providing richer content scenarios for their users. New theme options allow apps to look and feel as though they belong in SharePoint. Permissions from SharePoint propagate to the app, meaning creators don't need to manage special permissions.

Choose your own size of app

When you create or update a canvas app, you can customize its width and height. For example, you can configure an app for use on 4K monitors or embedded into a variety of applications inside of Office and Dynamics products.

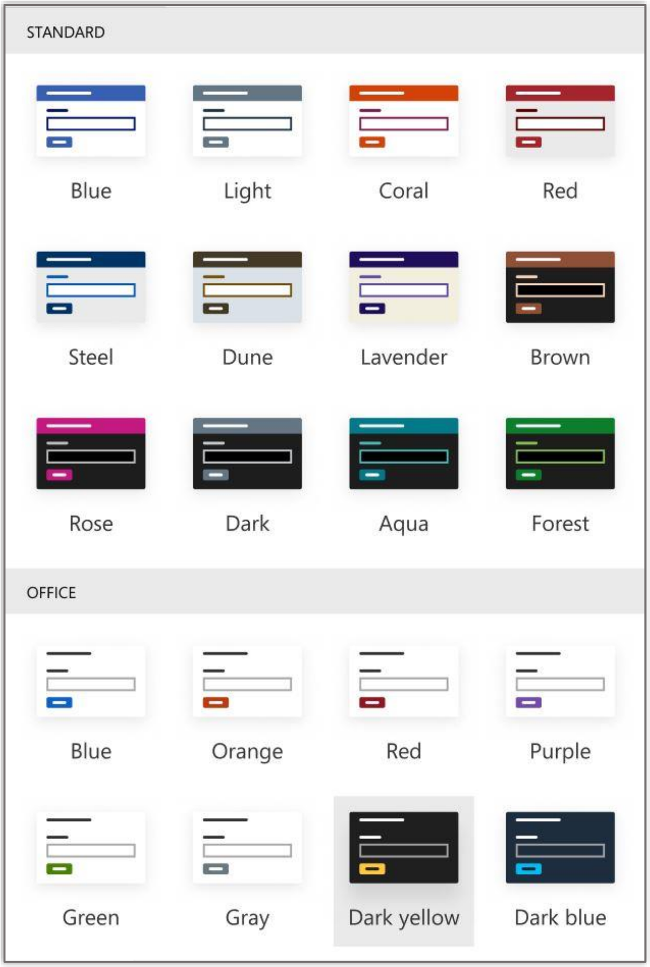
Create canvas apps with responsive layout

Normally the screens of a canvas app are scaled to fit the space provided by the app host. This makes it easy to create an app and know that it will look proportionally correct on any screen in which it's used. But it comes at a price - as screens get bigger, the app can't adapt to take advantage of the additional real estate. Many websites today are "responsive" - they adjust depending on the size of the screen they are shown on, adapting from small screens on phones to large screens on desktops.

With this feature, experienced app makers can create responsive canvas apps. You must write formulas that adapt the size and position of controls based on the size of the screen at runtime. You can turn off the default scaling behavior. As a result, screens show more information with more appropriate font sizes, all making for a better app experience.

Improved default themes help embedded apps look like they belong in SharePoint

App makers can apply any of eight Office themes to their canvas apps and forms. These new themes improve SharePoint embedding scenarios by aligning with the default SharePoint themes.



Theme colors

Enhanced SharePoint forms functionality

Forms customized with PowerApps in SharePoint are now easier to create and better looking. Theme options allow custom forms to look and feel like they belong in SharePoint. PowerApps offers easier styling, uploading of images, and rich text editing, as well as document libraries, cascading dropdowns, and conditional field visibility. Guest users on your site can also use custom forms.

PowerApps makers can create mashup apps with SharePoint Document Libraries

PowerApps app makers now get the capability to create mashup applications with SharePoint Document Libraries, which allows them to browse through folders, view and launch files in native applications, and upload and enhance metadata for their files. The SharePoint data connector has been enhanced to list Document Libraries within a specific SharePoint site, empowering the app makers to simply pick the Document Library they want to connect to, and removing the need to type in the name of the Document Library.

Rich Text Editor and HTML view controls for canvas apps

App makers can leverage the new Rich Text Editor control in canvas apps to allow end users to style their text, include lists, and insert links. This new control along with the HTML view control gives end users of apps full control of customizing text for scenarios like email and report editing in an app.

Easier to configure cascading dropdowns and conditional field visibility

With improvements to make sorting and filtering data easier, SharePoint form customizers are more successful at completing sophisticated forms, such as cascading dropdowns and showing or hiding fields based on conditions. Makers can use an interface to complete these scenarios or continue to write formulas.

Simplified gallery, form, and data table field selection and binding

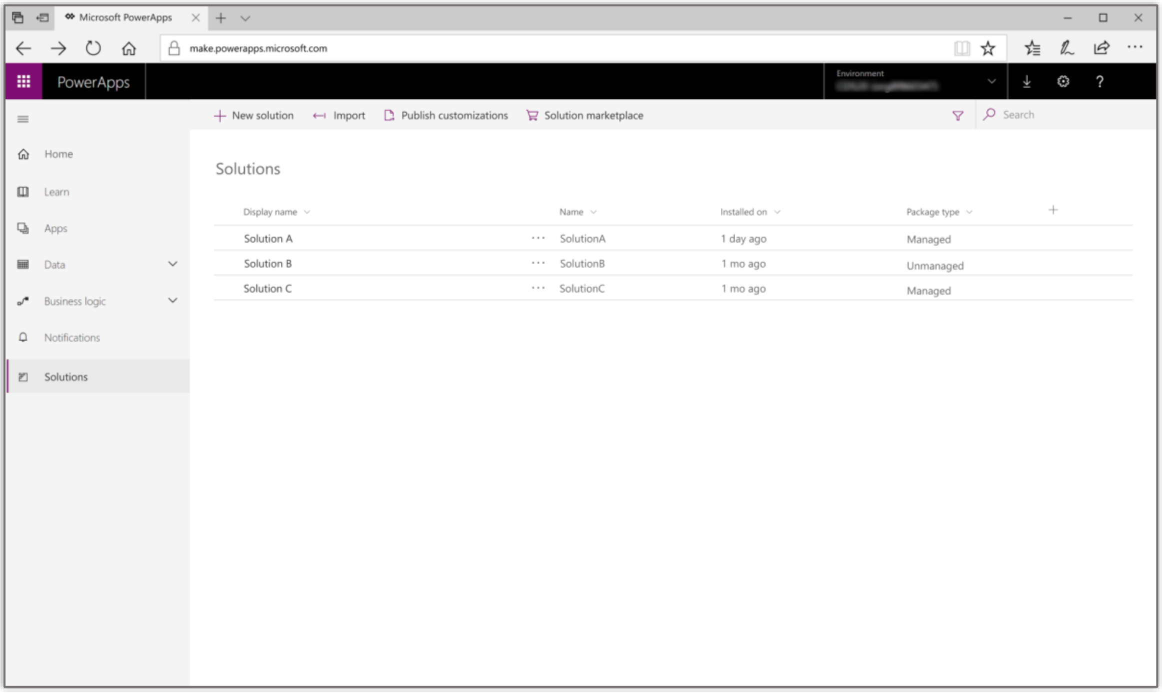
The fields list will have usability enhancements to make working with data in galleries, forms, and data tables easier.

When adding a new data table or form, fields will be suggested by the connector you're using to help get the most common fields into your app automatically.

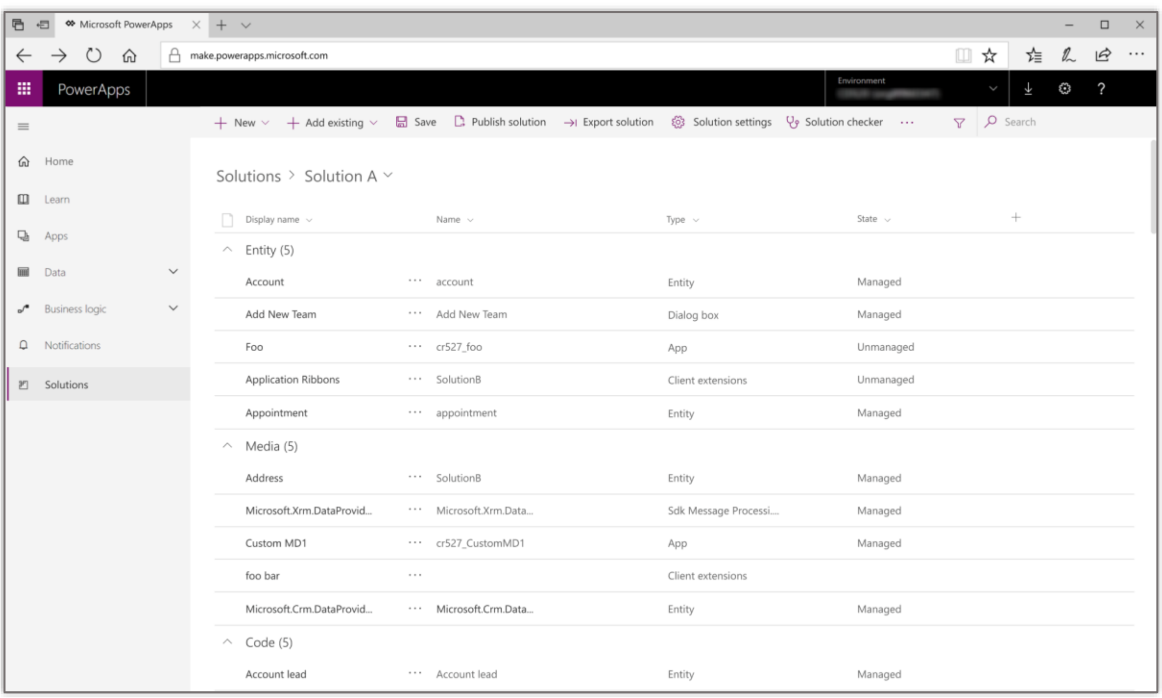
Connection, Data Source, and Field selection will have improved search to allow users to filter and search for a specific item.

Easier to find and work with solutions from PowerApps

You can work with solutions more easily by accessing the solution list in PowerApps. You can locate the solution that you need, open it, and search for a solution's component in the Solution Explorer. You don't need to access the classic Solution Explorer to manage the components within a solution.



Solution list



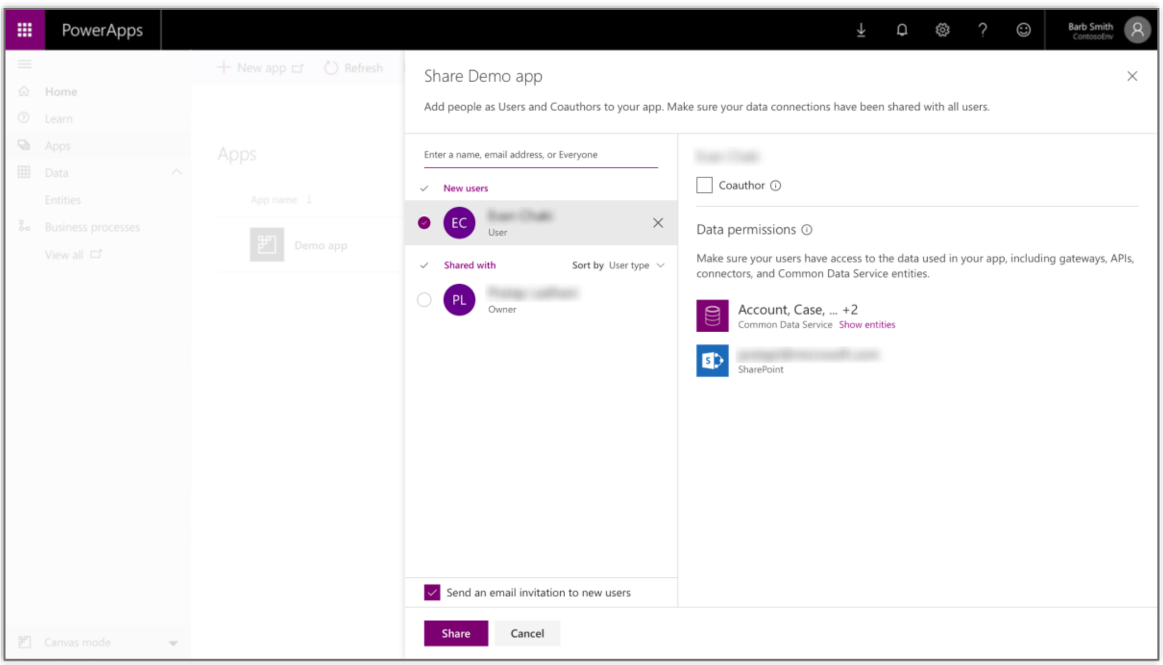
Solution Explorer

Improve ALM for canvas apps with solutions

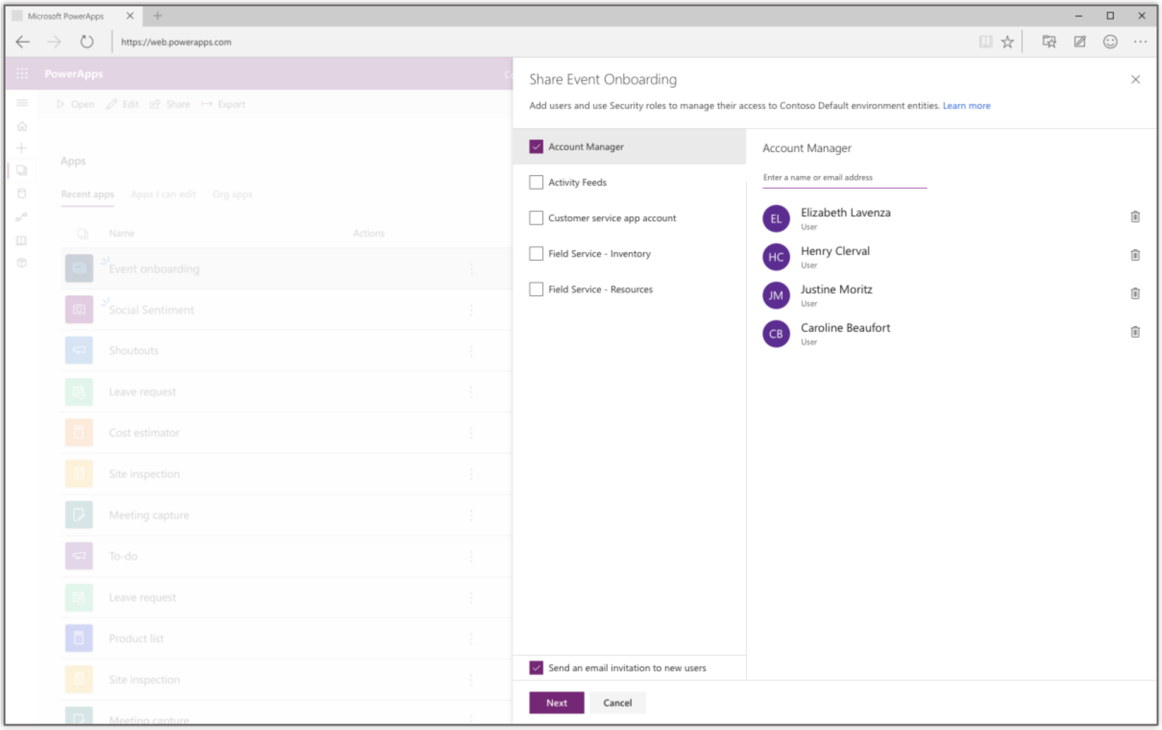
App makers, system integrators, and ISVs can more easily move assets from one environment to another by including canvas apps in solutions along with model-driven apps, flows, and other components. When app makers create an app or any other asset, they can quickly pick a solution they want their app to be in. PowerApps can also smartly create one for them by default. App makers can leverage import and export functionality to distribute composite solutions and manage app lifecycles across environments.

Sharing enhancements

Both canvas and model-driven apps are easier to share. For canvas apps, users will be able to view the data sources used by an app, making it easier to independently set up user permissions to access that data. For model-driven apps, users will have an inline experience to assign appropriate security roles that provide user access to the entities and data in the Common Data Service.



Sharing a canvas app



Sharing a model-driven app

Native support for Common Data Service data types in canvas apps

Today, support for some Common Data Service data types is limited or hard to use. Optionset values must be looked up manually on the maker portal, GUIDs are handled through strings that can cause problems in comparisons, and there are time zone issues with date only and date/time fields.

This feature cleans all that up, adding native support for optionsets and GUIDs and improving the time zone handling for date/time values.

Easy to work with many-to-one relationships in canvas apps for Common Data Service for Apps

Working with relational data is key to most business applications. Yet it can be tedious to write queries that pull in the necessary information, join on foreign keys, and control the projection.

With this feature, it all becomes a lot easier for canvas app makers when they use Common Data Service for Apps. For example, in the CDS for Apps standard model, there is an Account entity with a lookup for PrimaryContact that points to the Contacts entity. Let's say you need to display the last name of the primary contact in a gallery control. All you need to write is **ThisItem.PrimaryContact.LastName**. The Contacts data source doesn't even need to be loaded. PowerApps analyzes the app to determine which lookups are desired and to bring in only the fields that are required for the projection.

Catch, handle, and report errors, and write Null values to databases with canvas apps

Errors happen. Canvas apps provide a default behavior when they do, but this may not always match what you want. With this feature, you can catch, interrogate, throw, suppress, log, and message errors to your users.

Errors and Null values were previously indistinguishable, so pushing Null values to databases was a problem. Null is a legitimate value in many database systems. With errors properly separated out in canvas apps, you can write Null values to all databases.

Work with friendly display names in canvas apps when using Common Data Service or SharePoint

Both the Common Data Service and SharePoint maintain two names for every table and field. First, there's a developer-friendly name, which is somewhat cryptic, with no spaces, odd capitalization, underscores, and a requirement to be unique. Then there's a user-friendly name, meant for end users to see, with spaces and standard capitalization, displayed in the app's UI.

To date, PowerApps has only supported the developer names. With this feature, authors can now work with display names instead, making reading and writing of formulas easier and clearer.

Faster load times with parallel data loading in canvas apps

For better performance, many canvas-app makers will preload multiple tables and entities when their app starts. Today, this is done serially, one load after another, often in the **OnStart** formula of the app.

With this feature, app makers can load multiple data sets in parallel, dramatically reducing the end users' wait. And this facility isn't just limited to startup; makers can use it anywhere that parallel operations would improve performance.

Formula bar enhanced

Canvas apps operate by composing functions, such as Filter and Sort, to form powerful formulas. The result is often fed directly into a control, such as a gallery, which may interpret it further.

As compositions get more complex, it can become difficult to understand the impact of each function on the result. App makers will sometimes capture intermediate results into variables or create separate debug screens to display them. The lack of transparency makes it difficult to understand what's happening and debug issues.

This feature helps you get into the middle of the formula and understand what's happening. As in many other programming environments, you can select the entire formula or parts of the formula directly from the formula bar and see the data that's flowing from just that portion. Understanding and debugging apps got a lot easier and quicker.

Errors more discoverable by app makers

The Error checker tool guides makers in debugging their apps by providing a list of detected issues for the entire application in a single place. App makers can navigate directly from the error list to the screen and control where the error exists. The error list provides detailed information about the error and how to fix it and links to extra resources.

Formula formatting easier to read

Enhancements to the formula-bar editor provide the ability to format formulas, helping app makers read and understand them. As app makers create more complex line-of-business applications for their end users, this formatting allows multiple app makers to collaborate on apps.

Advanced relationships on entities

In PowerApps, not only can app makers create one-to-many, many-to-one, and many-to-many relationships, but makers also can enable hierarchies and configure mapping between entities to assist in defaulting fields when relating records to each other. More advanced settings require the Solution Explorer.

Simplified lookup field creation on entities

Lookup fields are currently created as part of defining a many-to-one relationship. While this will still be supported with this feature, users will be able to create the same type of relationship and lookup field by simply adding a lookup field to an entity, similar to the way you would do this today in SharePoint or Access.

Create automatic number sequences

In PowerApps, you can define one or more sequences in which numbers are generated automatically and applied to entities in Common Data Service for Apps.

Create and edit entities in PowerApps Studio while you build an app

As you create or modify an app, you can create and modify entities and option sets in PowerApps Studio instead of having to open another site.

Simplified management of advanced entity properties

Advanced properties related to entities and fields that are currently only available in the Solution Explorer will become available in the PowerApps portal for a simplified and consistent entity and field creation experience for app makers.

Create and view related flows from your entity

With the rich support in Microsoft Flow for Common Data Service for Apps, you can see all flows that relate to a specific entity directly from PowerApps. You can also create flows for data that's stored within Common Data Service for Apps.

Configure dependent option sets

By creating dependent option sets, you can easily set rules between option sets to make sure that selected values make sense. As an example, you can create a **Country/region** option set and a **States** option set. If a user selects **United States** in the drop-down list for the first option set, the drop-down list for the second option set should show only those states that are in that country/region. You can ensure that data is consistent and accurate by defining this structure at the entity level for consumption in all apps.

Dependent option sets on Unified Interface

By using the dependent option-set control on Unified Interface, you can enable users to enter data faster and more accurately.

Customizers can embed Power BI tiles and reports in entity forms

Bring the power and richness of Power BI to your forms by embedding reports and tiles of your choice. Customizers can model the Power BI reports and tiles to provide more meaningful insights by passing the record context, including any attribute information about the record or its related records.

Support for custom messages

Customers will be able to customize messages for any entity that is part of a solution that is imported to their instance. This custom message will be supported during Unified Interface runtime

Improved experience for building model-driven apps

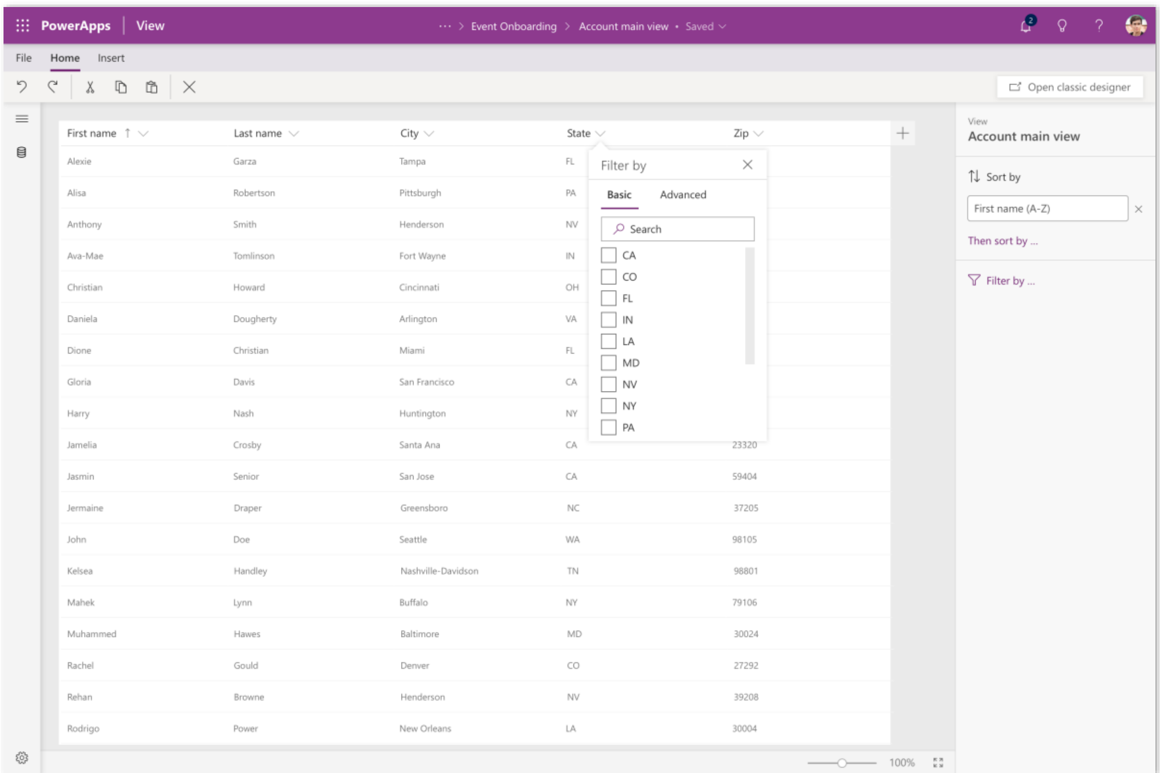
App makers can more easily compose and test model-driven apps in the designer. The navigation and configuration was simplified to support both Web and Unified Interface. Editing app components is easier through quicker access to deep links. After saving and publishing changes, makers can run the app directly from the designer to quickly test the changes.

New model-driven form designer preview

Customizers can do more with their entity form authoring using our new form designer, available as a preview in this release. The new form designer provides a WYSIWYG authoring experience, helping to boost productivity by enabling customizers to directly see what their form will look like to end users. The form designer also provides full support for keyboard accessibility to meet customizers' needs and preferences.

Model-driven view designer enhancements

An improved view designer within PowerApps will allow app customizers to see a live preview as they apply advanced filtering and sorting logic. Additionally, we are adding simplified sorting and sorting via the column headers like SharePoint and Excel to make it faster to get the view you want.



View designer

Improvements in end-user experiences

PowerApps is a best-in-class, enterprise-ready platform providing end users with fast, reliable, and consistent user experiences across web and mobile devices.

Customers of Dynamics 365 for Sales, Customer Service, Field Service, and Project Service, as well as IT and ISV apps, can now use the Unified Client Interface (UCI) for adaptable, performant, and responsive experiences that provide all the functionality they need. A unified mobile player also provides a single place to find and launch model and canvas applications built by Microsoft, ISVs, and IT departments.

Improved app discovery for app consumers

App consumers can be productive more quickly by discovering, previewing, and running their own and their org's model-driven and canvas apps through a unified landing page on PowerApps.

Improved speed of apps

PowerApps authoring experiences on the web, as well as the app-playing experience, continue to get faster. When older apps are updated and republished to end users, that step repackages older apps into the most recent build of PowerApps. End users experience faster load times and performance as they use the app.

Model-driven mobile applications are more reliable

Mobile applications run faster and don't hang. Any errors that users see are actionable to enable self-resolution or provide relevant information to Microsoft for quick support.

Faster loading model-driven apps

Pages of model-driven applications load significantly faster as visible regions are rendered first and optimized for different browsers. Users will also see improved performance on Internet Explorer 11 and Edge browsers with Unified Interface.

Improved reliability of offline experience for canvas apps

Canvas apps on devices using SaveData/LoadData are more reliable in offline scenarios. App makers can store up to 20 MB of data or 20 images offline in a single call, which allows makers to create more robust field service apps.

PowerApps forms in SharePoint are faster

A number of performance improvements are available in SharePoint when using embedded PowerApps forms, including:

- Embedded forms load faster and deliver list data quicker.
- Faster authoring of custom forms through PowerApps Studio.
- SharePoint embedded forms load progressively by default.

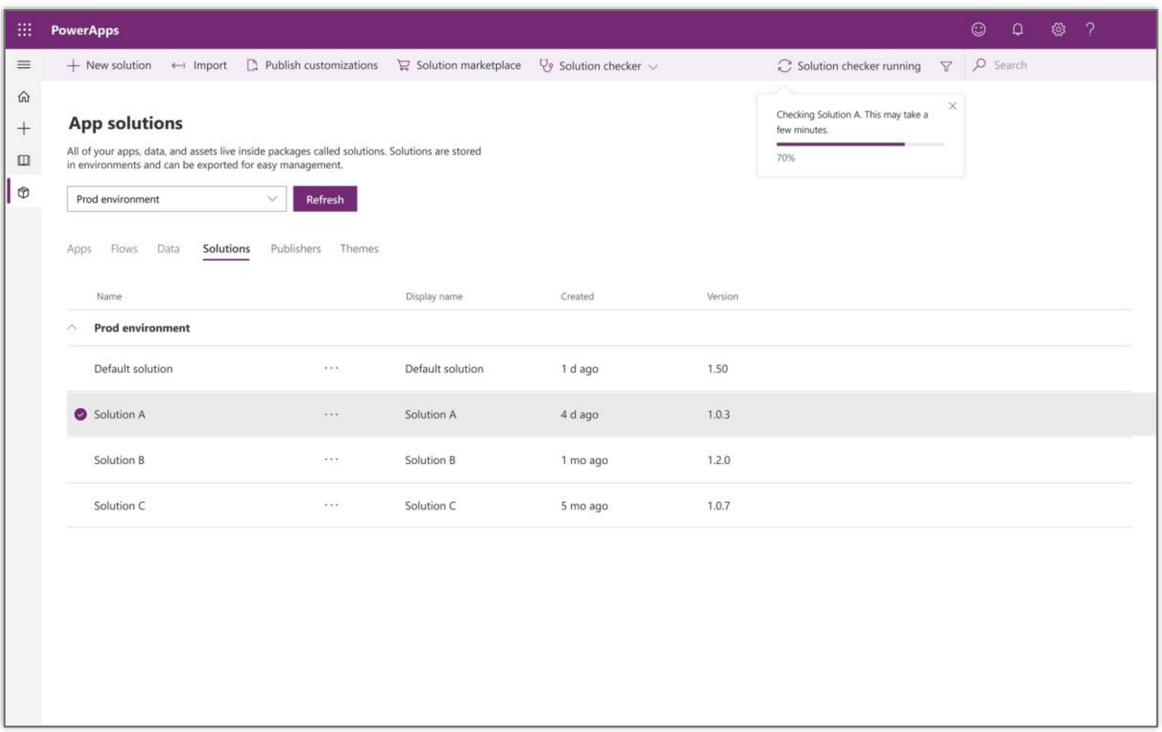
These enhancements provide an overall better experience for end users and app makers.

Build model-driven apps of higher quality with Solution checker

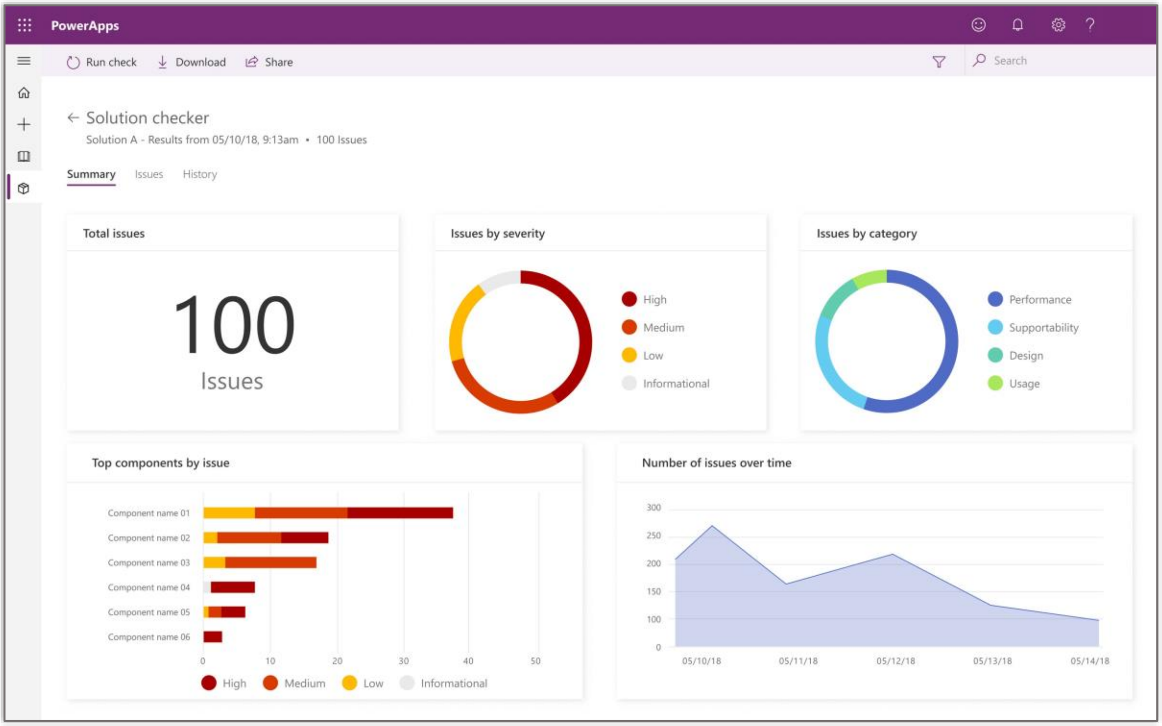
Solution checker promotes higher-quality model-driven apps by helping app makers follow best practices when they customize and extend the PowerApps platform. By running the checker, app makers can answer questions such as these:

- What areas of my PowerApps implementation pose a performance or reliability risk?
- Am I using the PowerApps extensibility architecture and provided APIs appropriately?
- What APIs will be deprecated in the next major release of PowerApps?

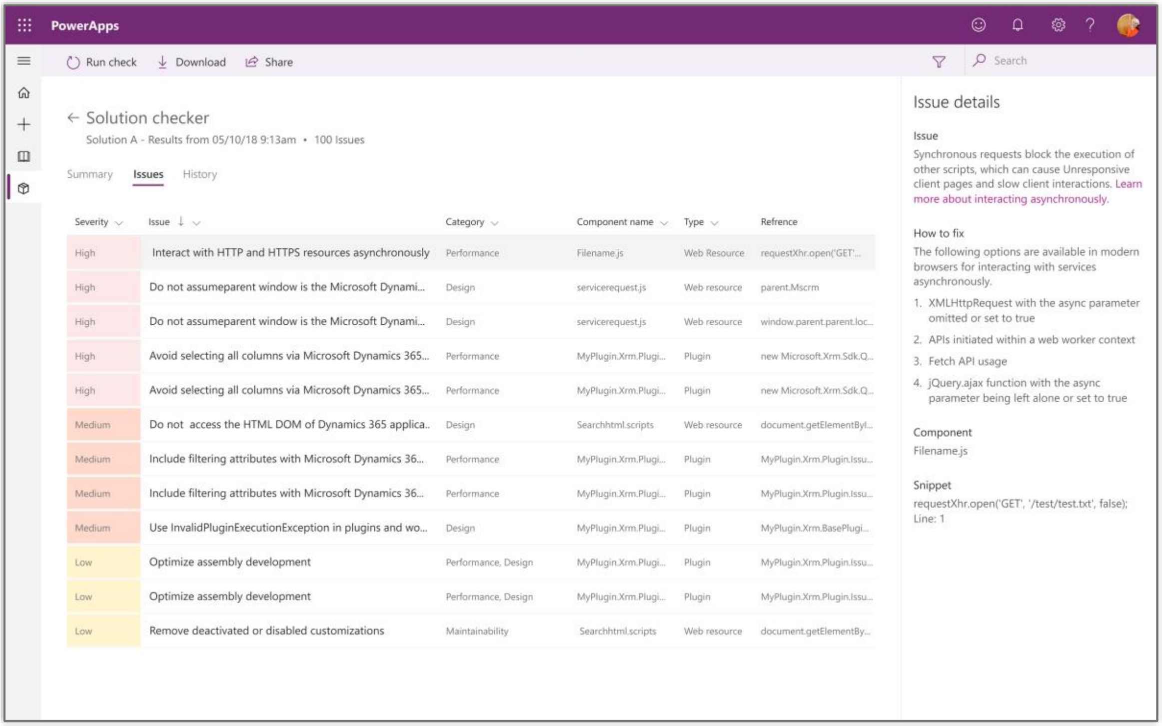
App makers can access an actionable scorecard that lists top solution issues. For each issue identified, the scorecard points to specific occurrences within the code or customizations where improvements may be required. Most importantly, app makers can discover how to implement these improvements by following detailed guidance.



Solution list with checker running



Solution checker results



Solution checker issue list

Dynamics 365 mobile support email login

Users of Dynamics 365 Online or model-driven apps on PowerApps can sign in to the Dynamics 365 app on Android and iOS using their email addresses instead of server URLs. After signing in, they can see and choose from all their available online organizations/environments.

Manage and run SQL Server Reporting Services (SSRS) reports

Use reports to manage your business, analyze the state of progress, or simply view a line-item level summary of data. You can manage your SSRS reports and run entity-level reports from any record or grid.

Entities added to the Unified Interface

End users can edit and use record types (such as Users, Teams, Position, and Currency) on Unified Interface.

Unified Interface form optimizations

Improvements for data density on forms and grids enable users to see more data without scrolling. These enhancements are helpful for entity forms with many sections and fields in them.

End users can create personal dashboards and share them with other users and teams

Create personal dashboards to track progress and status using widgets that show real-time information. You can create them whenever you need them, instead of depending on your system admin. You can share these dashboards with other users and teams in your organization. These dashboards are highly customizable - you can add widgets of your choice, and you can even embed Power BI dashboards and tiles.

End users can create charts and share them with other users and teams

Create personal charts to visualize data in real time. You can share these charts with other users and teams in your organization. These charts are highly customizable—you can add multiple series, and you can choose from a range of visualizations and aggregations.

General usability, accessibility, and styling improvements in system charts

Charts get more consistent interactions and capabilities across forms, dashboards, and grids. Visualize your data in two new kinds of charts—Doughnut and Tag. Customizers can also take advantage of general accessibility and styling improvements.

Filtering data on grids coming to Unified Interface

Users can use Excel-like filtering capabilities on grid columns of the read-only grids during Unified Interface runtime. This will enable a consistent filtering experience for users, whether they are using read-only or editable grids.

Access team on Unified Interface

Access team capabilities will be honored during Unified Interface runtime. Access teams provide an alternate way of exposing and sharing records across functional teams without the need to modify or update the base security model via Business Units, Security Roles, or Teams.

Enhancements to roll-up views in Common Data Service

With enhanced roll-up views, you can see a roll-up of records, such as related accounts and contacts besides activities.

More reliable Outlook Client v8.2 for Common Data Service

The new version of Dynamics 365 for Outlook will have performance enhancements to address Outlook boot and hang issues due to metadata cache refresh.

More reliable Outlook Client v9.0 for Common Data Service

The new version of Dynamics 365 for Outlook will have performance enhancements to address Outlook boot and hang issues due to metadata cache refresh.

Set Regarding lookup enhancements in Common Data Service

Setting Regarding of emails and appointments with App for Outlook gets easier with a host of improvements to the lookup experience. Administrators and customizers can filter the list of entities and views that appear in the Set Regarding lookup. End users can reliably narrow the scope of their search and locate Dynamics 365 records with ease.

Support for delegate users in Common Data Service

App for Outlook users can provide their team members delegate access to their mailbox and have the delegate user perform actions like Track and Set Regarding. Delegate users can use App for Outlook in the context of mailbox owner's mail and calendar items.

Sync specific appointments to Exchange

End users can create appointments in Dynamics 365 and save them as drafts without synchronizing to Exchange.

Increased performance for globally distributed Common Data Service for Apps enterprises

End users across many geographies and network latencies see consistent, fast performance regardless of their location with respect to the data center.

Better platform for administrators

Microsoft PowerApps makes maintaining and managing apps across your organization easier than ever. With the launch of the new admin center, admins and partners are embracing the more reliable, unified experience to manage storage capacity, environments, and deployments. Admins are more successful resolving issues via the integrated Help & Support experience in the admin center.

PowerApps supports Intune

PowerApps apps on Android and iOS are now integrated with Intune and support Intune policies for mobile application management, enabling customers to have better control and security over their data.

Control availability of user experiences on Unified Interface

New and existing end users can access core commands during Unified Interface runtime. Admins can, at the organization level, turn these experiences on or off for their users.

- **Advanced find**
  Users can build queries to find targeted records and also create personal views.
- **Merge records**
  Users can merge two records.
- **Record sharing**
  Users can share records with other users and teams.
- **Bulk edit**
  Users can edit multiple records at the same time.
- **Email template with slugs**
  Users can create their own email templates and use system email templates with capabilities of auto-populating data that relates to the record that they are sending an email about.
- **Run workflow**
  Users can run on-demand workflows.
- Users can access their personal settings from within Unified Interface.

Admin experiences available from Unified Interface

Administrators can access content and links that they need from Unified Interface, as well as quickly accessing the PowerApps admin center.

Enhanced Service Health page

Everyone can view the service at a high level, and the admin center offers details about the customer's resources.

PowerApps audit events

Admins now have more visibility over the PowerApps adoption and activity within their organization. Records of all admin and maker activities are now available for admins to view in the Office 365 Security & Compliance center, which also allows admins to configure activity alert for more proactive monitoring.

Enhanced Help & Support for admins

With the Help & Support experience in the Business Application Platform Admin Center, not only can admins escalate and engage with customer support more easily but also, with in-line self-help, admins have become even more successful at diagnosing and resolving solutions on their own.

Unified environment administration

Admins now have more visibility over the PowerApps, Microsoft Flow, and Common Data Service for Apps activity and usage within their organization. From the Business Application Platform Admin Center, admins can review tenant-wide and environment-level reports detailing active users, app usage, and flow usage across their organization.

New admin analytics reports

For Common Data Service for Apps admins, there is no longer a need to install the Org Insights solution in their environment; all of the org insights reports are available (by default) from the admin center.

Microsoft Flow

Overview of Microsoft Flow October '18 release

Microsoft is modernizing business processes across productivity: CRM and ERP applications. It's easier for every business (and business function) to transform how people work. Microsoft Flow, Microsoft's workflow and business process management platform, is core to the success of this mission.

Microsoft Flow offers rich workflow and business process capabilities for the Business Application platform, and for the Dynamics 365 and Office 365 services that build on that platform. This October, Microsoft Flow is doubling down on the platform integration by releasing key capabilities that enhance the power of all the above products.

Microsoft Flow is the connective glue that's used by end users and app developers alike for digital transformation, no matter what application they are using.

Summary of what's new in Microsoft Flow

Integrated experiences

Better together with Office 365 and Dynamics 365 to provide integrated experiences in SharePoint, Teams, Excel and more.

Feature	Release type	Target release month
OneDrive for Business Flow launch panel	General Availability	October 2018
OneDrive for Business request sign-off	General Availability	October 2018
Flow for SharePoint admin scenarios	General Availability	October 2018
SharePoint Remind Me	General Availability	October 2018
Microsoft Teams uses Flow as a bot	General Availability	October 2018
Design flows in Visio	General Availability	October 2018

Building the platform

An enterprise-grade platform that meets the lifecycle and compliance requirements of makers and admins.

Feature	Release type	Target release month
Flow management connector, SDK, and APIs	General Availability	October 2018
South America	General Availability	October 2018
US government cloud deployment	General Availability	October 2018
Power Query integration	General Availability	October 2018
Admin analytics	General Availability	October 2018

Democratize business processes

Democratize business process so any user can build and run the processes key to their business.

Feature	Release type	Target release month
Custom controls in business process flows	General Availability	October 2018

Empower citizen developers

Provide the key features that citizen developers need to use Microsoft Flow to build more reliable, production-ready solutions.

Feature	Release type	Target release month
Flow support help inside of the Flow designer	General Availability	October 2018
Diet designer for all templates	General Availability	October 2018
Flow checker	General Availability	October 2018
Flow designer enhancements	General Availability	October 2018
Leverage device signals on mobile devices	General Availability	October 2018
Flow button enhancements	General Availability	October 2018

Integrated experiences

Microsoft Flow has deep integration with other Microsoft applications, enabling the transformation of business processes where they are already happening today.

Flow has made updates for users who are migrating to Flow from SharePoint Workflows. We have added several missing triggers and actions in the SharePoint connector, and enhancements to Microsoft Flow's modern approvals functionality. In addition to SharePoint Workflow scenarios, Flow has enhanced integrations with Microsoft Teams, OneDrive, and more.

OneDrive for Business Flow launch panel

Just like with the Flow Launch Panel in SharePoint, users will be able to run flows on selected files from OneDrive for Business. This enables the invoker to bring in their own credentials, especially for flows that may have been created by IT, and get prompts for runtime inputs like Approver or Message, which can be of type Text, File, Email, Boolean, or Number.

OneDrive for Business request sign-off

Through an embedded Flow launch panel experience, users will be able to create and run an out-of-box flow to send sign-off requests to any user in their tenant along with a message. Once the approver responds, the initiator is sent a confirmation email with feedback from the approver.

Flow for SharePoint admin scenarios

As covered by this idea, site owners will be prompted to create and run an approval process whenever they want to join a hub site in their tenant. Furthermore, for organizations that have turned off self-site creation, users can now request a site to be provisioned, which will initiate a request to SharePoint administrators before being provisioned.

SharePoint Remind Me

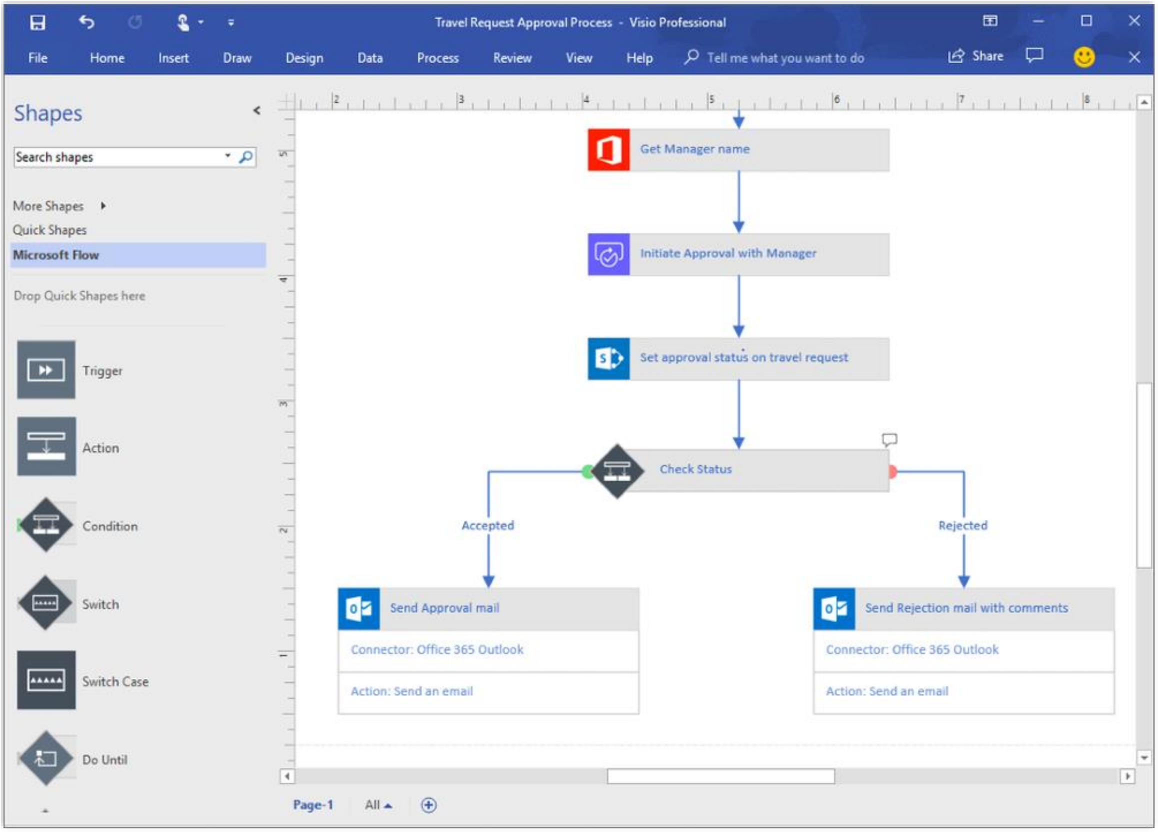
If a list or library has a date/time column, users will be able to quickly provision a flow that sends out alerts based on upcoming dates in the selected column.

Microsoft Teams uses Flow as a bot

Users will be able to invoke button flows using an embedded experience in Teams. To start a flow, call it with the bot by saying "list flows," followed by "select flow 1."

Design flows in Visio

Microsoft Visio enables enterprises to capture their business processes using its rich modeling capabilities. Anyone who creates flowcharts or SharePoint workflows can now use Visio to design Microsoft Flow workflows. You can use Visio's sharing and commenting capabilities to collaborate with multiple stakeholders and arrive at a complete workflow in little time. As requested here, you can publish the workflow to Microsoft Flow, then supply parameters to activate it.



Screenshot of Visio

Many processes share a common model but have minor variations throughout an organization. This allows an organization to create a master workflow model and adjust instances with specialized parameters.

This feature will be available to Visio Online Plan 2 subscription users. Office Insiders can expect early access in July 2018. In the future, you'll also be able to export existing Flows and modify them in Visio.

Building the platform

First, Microsoft Flow is part of the single maker experience for the entire Business Application platform. There are now common underlying concepts: a single security model for all resources and a common approach to solution management. The way that makers distribute their applications and flows is now common, meaning makers can share their flows—including recurring flows—in their organization based on security roles in Common Data Service for Apps. The user interfaces are also now integrated—flows can be authored and invoked inside the PowerApps Studio.

Flow management connector, SDK, and APIs

We are seeing greater demand from customers looking for makers and administrators to automate application lifecycle management tasks and automate the permissions and governance of flows within a tenant. As part of this feature, we will be documenting APIs and SDKs that allow organizations to build additional tooling to streamline their processes. We will also be expanding upon our existing Flow management connector, allowing organizations to automate their IT operations through Microsoft Flow.

South America

The South America region is now available for Microsoft Flow. This means that you can create environments in South America, and all the flow customer data will be maintained solely within the Americas. To learn more about our commitments to storing data, visit the Microsoft Trust Center page for Microsoft Flow.

US government cloud deployment

The GCC and GCC High regions are now available for Microsoft Flow. This means that Flow will now submit for approval for US government certifications. To learn more about our commitments to storing data, visit the Microsoft Trust Center page for Microsoft Flow.

Power Query integration

Power Query is a data ingestion tool that allows power users to transform, filter, manipulate, and import data into popular data stores like Power BI and CDS. We are adding this same capability to Microsoft Flow that will allow makers to shape data mashups from SQL Server using a Power Query Online experience.

Admin analytics

As Microsoft Flow adoption grows within the enterprise, customers have expressed a need for greater visibility into how their organization is using Microsoft Flow. Administrators will initially be able to explore analytics related to executions, usage, sharing, and error details. Additional data visualizations will be added iteratively, including connectors and performance.

Democratize business processes

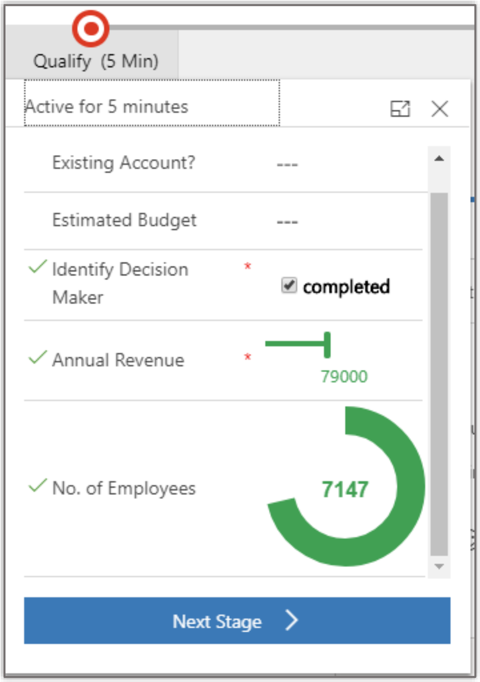
Modernizing business processes is one of the core missions of the Business Applications Platform at Microsoft, and Microsoft Flow is the offering that will be able to bring business processes to everyone in an organization.

We previously introduced a key new concept to all Microsoft Flow users from Dynamics 365: Business process flows. This new type of flow is defined by a set of stages that end users walk through. Just like automated flows, these stages can have branching conditional logic but, unlike automated flows, end users can jump forward or backward to previous stages.

By building Business process flows into Microsoft Flow, we are making it possible for any user, without customization experience, to create these flows for their organization.

Custom controls in business process flows

Business process flows provide a guided way for customers to walk through their business processes and focus on the data that is most important to them. It encapsulates only the fields pertinent to a business process into relevant stages. These fields are referred to as steps and are bound to Common Data Service for Apps (CDS) entity attributes. Previously, business process flows only permitted the available XRM attribute types (such as text, optionset, lookup, number, and so on) to be surfaced as control steps inside business process flow stages. Now, custom controls, which offer rich interaction mechanisms both in Unified Interface and the Web Client, are supported. They power controls such as sliders, radial knobs, timelines, and even the LinkedIn controls.



Example of custom controls

This feature increases the potential for intuitive and immersive process runtime experiences.

Empower citizen developers

Every time a flow fails, there could be a critical business process that is not being completed. As a result, for Flow to address the most rigorous and complex customer scenarios, we are adding many different features that will help citizen developers to build and deploy flows more easily and reliably.

The new **Flow checker** feature promotes higher quality flows by ensuring citizen developers follow best practices. By running the checker, they will be able to get answers to questions like *which areas of my Flow implementation pose a performance or reliability risk?*

For each issue identified, **Flow checker** will point to specific occurrences within the flow where improvements may be required. And more importantly, they will have the knowledge of how to implement these improvements by following detailed guidance.

Integrated help and support experience in Flow designer

A user will have a much easier time seeking help and support from within the product (both website and mobile) instead of being redirected to support.microsoft.com. The user will be able to narrow down into the problem that they are facing by walking through a logical set of questions and by providing the particulars of their ask - right from how-to questions to selecting a specific flow run failure for a flow that they are an author on.

The user is also provided with a curated list of solutions for their problem that are sourced from Flow documentation, blog posts, community forums, and KB articles to get self-help for the issue at hand. The self-help solutions will enable the user to fix the issue on their own without opening a support ticket. If the user chooses to go through with opening the support ticket, they will be provided with a timeline on when the support team will get in touch.

Diet designer for all templates

Introducing a new and improved experience for creating flows from templates. With this new update, you don't need to worry about the internal logic for enabling a business scenario or how to create a workflow for it. Just choose the template that fits your needs, provide configuration inputs and connections, and you will be automating business scenarios in a minute or less!

Flow checker

The **Flow checker** feature will help you while you build your flows. It will check for errors at design time and will also look for errors that may have occurred on past runs.

Flow checker will also provide remediation steps for commonly faced errors, along with links to helpful articles and documentation on best practices.

Flow designer enhancements

A new, rich HTML-based text editor will help you write HTML-based emails, HTML content for your Yammer posts, tweets, and more.

Leverage device signals on mobile devices

As covered by this idea, customers can now use their location as a connector. The feature allows users to create a location range that will trigger a flow when a mobile device enters or leaves it. This enables certain flows to automatically occur, without needing activation from the user, further adding to the mobile applications efficiency.

Flow button enhancements

As covered by this idea, users will be able to pass richer data to button flows.

Business intelligence

Overview of Business Intelligence October '18 release

With a focus on delivering immediate, out-of-the-box value to business users, Power BI has enabled users to address their own needs through a combination of prepackaged content and the ease of developing and sharing reports and dashboards. The resulting access to insights has proven a key enabler to organizations adopting a data-driven culture.

The October '18 release includes several innovations that further the democratization of business intelligence across the enterprise.

Power BI Desktop

Microsoft has rapidly delivered over 215 Power BI Desktop features in a series of monthly updates in response to passionate user feedback on proposed features. This October '18 release includes ways for report consumers to tweak visuals to answer a specific question about their data, even if they don't have edit access to the report, support for a pivot-table-like expand/collapse on the matrix visual, and continued improvements to Q&A usability.

For Power BI authors, the desktop adds composite models that allow data mashups across Direct Query and imported data sources, to augment data with additional insights. New navigation options, more flexible theming and branding, and expression-based formatting enable authors to create rich Power BI content with ease.

Power BI Desktop continues to use AI and natural language to make authors' lives easier. By leveraging new telemetry from Power BI, ISVs can learn how Q&A is being used in their apps and use this data to improve Q&A results. In addition, Quick Insights works over non-additive measures with complex business logic. These capabilities allow report authors to ensure users get the best results by leveraging both AI and the author's domain knowledge.

Power BI Service

The October '18 release brings new capabilities in two primary areas, big data and enterprise.

Working with big data

- **Starting with the Common Data Model** – Power BI supports a Common Data Model, published by Microsoft, that provides a standard yet extensible collection of data schemas (entities, attributes, and relationships) for business applications. Users can take advantage of a standard schema – or customize it based on their unique needs – to simplify how they enrich their data with other data sources, from Microsoft and third parties, to accelerate analysis.

- **Self-service data prep for big data** – We're expanding self-service data prep in Power BI with new capabilities to help business analysts extract insights from big data. Using the Power Query experience already familiar to millions of Power BI Desktop and Excel users, business analysts can ingest, transform, integrate, and enrich big data with Power BI – including data from a large and growing set of supported on-premises and cloud-based data sources, such as Dynamics 365, Salesforce, Azure SQL Data Warehouse, Excel, and SharePoint. Users can directly map data to known entities, modify and extend existing entities, or create custom entities all within Power BI.
- **Advanced analytics and AI with Azure** - We're fueling collaboration across roles by unifying access to data between Power BI and Azure Data Lake Storage. Business analysts can seamlessly operate on data stored in Azure Data Lake Storage with the self-service capabilities in Power BI, while data engineers, data scientists, and other users can extend access to insights with advanced analytics and AI from complementary Azure Data Services like Azure Data Factory, Azure Databricks, and Azure Machine Learning. For example, data engineers can add, enrich, and orchestrate data; data scientists can build machine learning models; and business analysts can benefit from the work of others and the data available in Azure Data Lake Storage while continuing to use the self-service tools in Power BI to build and share insights broadly.

Enterprise BI

- **Enterprise reporting** – Popular and proven SQL Server Reporting Services technology is now part of Power BI, creating a unified, secure, enterprisewide reporting platform accessible to any user across devices. Pixel-perfect paginated reports can now be included alongside Power BI's existing interactive reports.
- **Multiple geographies** – New flexibility to deploy Power BI in specific global regions enables organizations to keep data close to users for optimal performance and to meet data residency requirements.
- **Enterprise-scale BI models** – We're integrating the full power of SQL Server Analysis Services into Power BI, expanding the service with a highly scalable platform for semantic BI models. Organizations can provide users with reports that are fast, highly available, and easy to manage, while aligning with their unique compliance requirements. And with incremental refresh and aggregation capabilities, Power BI can query large amounts of data, while still enabling quick, interactive user experiences.
- **Application lifecycle management (ALM)** – Adds new capabilities for enterprise-grade lifecycle management, as well as full API support for datasets through the XMLA protocol to help customers connect a variety of third-party BI tools to Power BI to create a unified enterprise semantic model repository.

Power BI Mobile

Power BI Mobile apps bring data and insights to any device. Business users can securely access and view Power BI dashboards and reports on any device, with mobile-optimized experiences for Windows, iOS, and Android. Key capabilities for the October '18 release include shared credentials with Office apps, new personal navigation and landing experience, and collaboration capabilities on data.

Power BI Embedded

The October '18 release includes:

- A developer center with the resources developers need to develop their Power BI solutions.
- Automatic end-to-end deployment of Power BI Embedded solutions.
- Integration with Azure diagnostics and Azure health.

Power BI Report Server

With the Power BI Report Server, customers can meet their unique governance and deployment requirements while enjoying modern Power BI reports. In the November '18 update to Power BI Report Server, customers will benefit from many of the features released in Power BI Desktop over the previous months, including drill-through on measures and conditional formatting based on another column.

Azure Analysis Services

Azure Analysis Services offers the proven analytics engine of SQL Server Analysis Services as a fully managed hosted service. All new in October '18 are:

- **Resource governance properties** – Ability to set maximum memory size per query and maximum number of rows for results to improve your control of resource use.
- **MDX column controls** – Turn off MDX usage of certain columns to dramatically reduce processing times and memory consumption.

Summary of what's new in business intelligence

This topic lists the Power BI features planned for release between October 2018 and March 2019.

Power BI Desktop

Feature	Release type	Target release month
Accessibility: slicers - End users can use a keyboard to interact with slicers	General Availability	October 2018
Flexible matching in Q&A - Better Q&A results when a user misspells words while asking a question	General Availability	October 2018
Expression-based formatting	General Availability	October 2018
Show measures as clickable URLs	General Availability	October 2018
Theming over report level and visual container styles	General Availability	October 2018
Theming general availability	General Availability	October 2018
Accessibility: filter pane - Users can interact with the filter pane and add new filters via keyboard and screen reader	Public Preview	October 2018
Ad-hoc exploration	Public Preview	October 2018
Additional Quick Insights	Public Preview	October 2018
Aggregations	Public Preview	October 2018
Composite models	Public Preview	October 2018
Copy data from table and matrix visuals	Public Preview	October 2018
Custom fonts	Public Preview	October 2018
Expand and collapse in matrix visual	Public Preview	October 2018
Q&A telemetry pipeline	Public Preview	October 2018
Quick Insights for non-additive measures	Public Preview	October 2018
Report wallpapers	Public Preview	October 2018

Power BI Service

Feature	Release type	Target release month
Home	General Availability	October 2018
Self-service data prep with dataflows	General Availability	October 2018
Dataset metadata translations	General Availability	October 2018
Commenting	General Availability	October 2018
Subscribe Others to Emails - Subscribe other users or distribution lists to scheduled emails of reports and dashboards	General Availability	October 2018
Filters for report sharing	General Availability	October 2018
Admin APIs	General Availability	October 2018
Additional report URL parameter Support	General Availability	October 2018
PowerApps Custom Visual - BI creators are now able to consume PowerApps within their Power BI Reports in production solutions. Report creators can now refresh their Power BI reports from PowerApps unlocking many more ways to work transactionally with data warehouses within reports. BI creators also have simplified sharing options with their apps and reports.	General Availability	October 2018
Incremental data refresh (Power BI Premium) - Incrementally load new data into a dataset without reloading all the previous data.	General Availability	October 2018
Historical capacity metrics (Power BI Premium)	General Availability	October 2018
Azure integration	Public Preview	October 2018
Computed entities	Public Preview	October 2018
Linked entities	Public Preview	October 2018
Dataflow refresh	Public Preview	October 2018
Dataflows on Premium capacity	Public Preview	October 2018
Workspaces with Azure AD groups	Public Preview	October 2018

Feature	Release type	Target release month
Paginated reports (Power BI Premium)	Public Preview	October 2018
Multi-Geo for Compliance (Power BI Premium)	Public Preview	October 2018
Query acceleration for large datasets (Power BI Premium)	Public Preview	October 2018
XMLA endpoint for third-party client connectivity and lifecycle management (Power BI Premium)	Public Preview	October 2018

Power BI Mobile

Feature	Release type	Target release month
Remote configuration for Report Server	General Availability	October 2018
Drillthrough	General Availability	October 2018
Dashboard-level commenting	General Availability	October 2018
Consuming reports with shared filters (bookmarks)	General Availability	October 2018
Single sign-on for Windows devices	General Availability	October 2018
Mobile shared credentials	General Availability	October 2018
Paginated reports	Public Preview	October 2018
Power BI on Windows-based large screen devices	Public Preview	October 2018
Personalized Home experience	Public Preview	October 2018

Power BI Apps

Feature	Release type	Target release month
APIs to manage and embed Power BI apps	General Availability	October 2018
Embedding Power BI content from Power BI apps	General Availability	October 2018
Installing Power BI apps	General Availability	October 2018
Licensing enforcement for Power BI apps	General Availability	October 2018

Feature	Release type	Target release month
Personalization	General Availability	October 2018
Create a Power BI app package	General Availability	October 2018
ECMAScript support	General Availability	October 2018
Update an existing app	General Availability	October 2018

Power BI Custom Visuals

Feature	Release type	Target release month
Accessibility support for custom visuals	General Availability	October 2018
Certified custom visuals in the marketplace	General Availability	October 2018
Custom visual support for bookmarks	General Availability	October 2018
Custom visual support for persistent filters	General Availability	October 2018
Custom visual support for report tooltips	General Availability	October 2018
Organization visuals	General Availability	October 2018
Performance improvements	General Availability	October 2018
Custom visuals in Excel	Public Preview	October 2018

Power BI Embedded

Feature	Release type	Target release month
Apply and change themes	General Availability	October 2018
Automatic end-to-end deployment of Power BI Embedded solutions	General Availability	October 2018
Deploy an updated dashboard or tile to production	General Availability	October 2018
Enable developers to troubleshoot	General Availability	October 2018
Improved refresh APIs	General Availability	October 2018

Feature	Release type	Target release month
Integration with Azure Diagnostics	General Availability	October 2018
Integration with Azure Service Health	General Availability	October 2018
New developer portal	General Availability	October 2018
New metrics for Azure load monitoring	General Availability	October 2018
Single sign-on for Azure SQL Database	General Availability	October 2018
Visual configuration	General Availability	October 2018
Workspace Collections deprecation	General Availability	October 2018
Enable an app to programmatically use slicers	General Availability	October 2018
Multi-region support	Public Preview	October 2018
Supporting Azure Active Directory application authentication	Public Preview	October 2018
Upgraded workspaces	Public Preview	October 2018

Power BI Report Server

Feature	Release type	Target release month
Support for new features of Power BI reports	General Availability	November 2018
Row-level security (RLS)	General Availability	November 2018
Export to Excel	General Availability	November 2018

Azure Analysis Services

Feature	Release type	Target release month
Resource governance	General Availability	October 2018
MDX column controls	General Availability	October 2018

Power BI Desktop

Power BI Desktop continues to bring new capabilities to users. A strong focus on the fundamentals has unlocked new scenarios for large enterprises—including more accessible reporting and a continued investment in improving SAP connectivity.

New capabilities in Power BI Desktop include new ways for report consumers to tweak visuals to answer specific questions about their data, even if they don't have edit access to the report, support for a pivot table-like expand/collapse on the matrix visual, and continued improvements to Q&A usability in Power BI.

For authors of Power BI content, the desktop product has added broad capabilities to improve their experience and authoring power. Composite models allow mashups across DirectQuery and import data sources, allowing authors to augment data sources with additional insights. New navigation options, more flexible theming and branding, and expression-based formatting give authors the tools they need to create rich Power BI content with ease.

A new Power BI dataflows connector in Power BI Desktop lets authors easily add entities from Power BI dataflows to their data models and use them to create advanced reports and visualizations leveraging the standard schema of the Common Data Model. Authors can even mash up dataflow data with data from other sources to build fully customized solutions.

Power BI Desktop continues to leverage AI and natural language to make authors' lives easier, bringing even more intelligence and insight into Power BI reports. By leveraging new telemetry from Power BI, partners can learn how Q&A is being used in their Power BI apps and use this data to improve their Q&A results. In addition, they will now get Quick Insights on more metrics, including non-additive measures. These new capabilities allow the report author to ensure their users get the best results when working with Q&A and Quick Insights, by leveraging both AI and the specific domain knowledge only the author can bring.

Ad-hoc exploration (Public Preview)

Many report or dashboard consumers find themselves with follow-up questions for the visuals they see. They need to quickly look at a chart along a different axis, in a different format, or with a new filter applied. The ad-hoc exploration surface gives this user the flexibility to answer these questions without overwhelming them with the full report authoring experience, and without the need to have edit permissions to the report.

From charts on a dashboard or report, choose the **Explore from here** option. In the surface that opens, you can change the field used on the value or axis of a chart. You can update existing filters and add new ones. You can ask natural-language questions to find answers. Users need to have "explore" permissions to the underlying dataset, but don't need to have "edit" permissions to the report.

Additional quick insights (Public Preview)

When viewing a visual showing the distribution of a value across a category (for example, sales by product type), users can ask Power BI to show what other factors affect this distribution. This helps identify the impact on a metric without manually having to break down by each factor to experiment and find the impact.

When you find a chart that you want to understand further, right-click on a datapoint and select **Analyze** > **Explain the distribution**. This will show a variety of charts breaking down the distribution by different factors, filtered to values that have the biggest difference to the original distribution. You can choose the different filters in the chiclets at the top to view the other values that significantly change the distribution.

Aggregations (Public Preview)

Massive volumes of data require new ways of storing information to balance the needs of slice-and-dice interactive analysis with deep, detail-level reporting. Aggregations allow model developers to surface cached values at a high level for interactive analysis, but still let users drill down to detailed data that is queried from the underlying data.

You can create DirectQuery models over massive-scale data sources such as Spark clusters, or massive data warehouses. For interactive analysis, running queries directly against these datasets is impractical. But for datasets that could be as large as hundreds of terabytes, the data cannot all be cached in memory. Aggregations lets you cache just aggregate data into memory for fast access. You define tables in your data model as an aggregate table, linked to tables at the detail level.

The detail tables stay in DirectQuery mode but the aggregates are defined as being in dual mode so the data is also cached in memory at the aggregate level. If users run queries or create visuals that can be answered from the in-memory cache, the results are retrieved from there. But if the query requires the detail data, it's pushed down to the underlying DirectQuery source dynamically. The end user doesn't see any difference in experience in their Power BI report.

Composite models (Public Preview)

Composite models allow you to mix import and tabular direct query sources as well as have multiple tabular DirectQuery sources. This lets you augment your enterprise data models with imported tables.

Modelers can create a Power BI Desktop file over a DirectQuery datasource, and then also add tables that are imported from another data source. To support this new model structure, we also are introducing many-to-many relationships and tables that are in dual mode, which means they can act as import or DirectQuery, depending on what other tables you add to the visuals. Power BI will then intelligently serve answers to your analyses from either the imported data or by pushing a query to the underlying datasource.

Copy data from table and matrix visuals (Public Preview)

You can copy data from a table or matrix visual into other applications. Select the data you want to copy, right-click the visual, and select **Copy data** to copy the data in your system clipboard.

Custom fonts (Public Preview)

Corporate themes often include specific fonts that are distributed and used throughout the company. You can use those fonts in your Power BI reports.

For any font property, Power BI Desktop will show a complete list of all the fonts installed on your computer. You can choose from these to use in your report. When distributing the report, anyone with the font installed will see it reflected in the report. If the end user doesn't have it installed, it falls back to the default font.

Expand and collapse in matrix visual (Public Preview)

End users who are familiar with the PivotTable experience in Excel need a similar one in the Power BI matrix visual. Users can expand items in the matrix to see details while still showing higher-level information.

You can create a multilevel hierarchy on matrix visuals by adding multiple fields to the 'Rows' area of the field well. You can then expand and collapse items in the matrix hierarchy by clicking the plus/minus buttons to show details at a lower level.

Expression-based formatting

Report authors need flexibility over how their visuals are formatted. As well as defining formatting through the formatting pane, a DAX expression can be used to set the formatting, giving full control over the business logic used to format the visual.

Authors can create rules that set the color of a KPI based on the progress towards a goal, set the style of a line on a chart based on which category is performing best, or any combination of these. Authors can even dynamically update the title of a visual based on selections made elsewhere in the report.

Q&A Telemetry Pipeline (Public Preview)

Partners creating Power BI apps can consume usage data on Q&A in their app, helping them learn how to improve their linguistic schema and Q&A results based on actual usage.

Q&A questions are captured by the Power BI system as users ask them. They are scrubbed for personally identifiable information (PII) and other sensitive data, other metadata attached, and metrics created such as number of times asked, number of responses, and user feedback on the response. Partners can then access this data to help them tune the linguistic schema of their models and applications to provide a better experience for their users.

Quick Insights for non-additive measures (Public Preview)

Quick Insights provides automated explanations for trends, changes, and distributions in users' data. Support for non-additive measures means these insights can be provided over metrics that use complex business logic such as inventory and user analytics.

Explain the increase and other Quick Insights features will work with model measures. Power BI analyzes the DAX structure of the measure to understand the dependent fields, and generates insights based on variations in those values.

Report wallpapers (Public Preview)

Control the chrome surrounding report pages to better match the branding of your reporting applications.

Report authors can now control the formatting of the gray area behind report pages to create richer, more integrated reporting applications. In the formatting pane, you see a card for **Wallpaper** with options for color, transparency, and an option to load an image that scales across the space outside your report.

Show measures as clickable URLS

End users need an easy way to navigate between reports, or from reports to other applications, while still retaining the context of the data they were looking at. Measures can generate URLs to allow navigation, and can be shown as hyperlinks that make it easy to move between reports or applications.

A DAX measure can return a URL, appended with filters corresponding to the data selections made in the report. This can be shown in table and matrix visuals as a hyperlink, dynamically adjusted based on the selections that are made. End users can click this link to open a new tab with the target report shown.

The DAX measure might look something like this:

```
Link = “http://app.powerbi.com/Report/GUID/&filter=Table1/Category eq “ &
SELECTEDVALUE(Products[Category])
```

Theming over report level and visual container styles

Report authors need common formatting applied to all their reports. Power BI allows you to create themes that define the formatting options for each visual, and now for report and visual container styles, too.

Authors can create themes that specify formatting for all parts of their report, including page background color, visual headers, borders, and so on. They also can style all visuals including text boxes.

Theming general availability

Manually editing every visual in a report to match, for example, corporate branding guidelines can be a laborious and time-consuming process. Power BI Desktop lets you apply a theme file to your reports to automatically apply styles and formatting properties.

In reaching general availability, this feature now lets you control text boxes in your report as well as properties on all core visuals. Power BI also provides a UI for controlling the core colors in your theme and saving the current report theme as a file to be applied to other reports.

Power BI service

The October '18 release brings new capabilities in two primary areas: Working with big data and enterprise BI.

Working with big data

- **Starting with the Common Data Model** – Power BI supports the Common Data Model, published by Microsoft, that provides a standard yet extensible collection of data schemas (entities, attributes and relationships) for business applications. Users can take advantage of a standard schema – or customize it based on their unique needs – to simplify how they enrich their data with other data sources, from Microsoft and third parties, to accelerate analysis.
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- **Enterprise reporting** – Popular and proven SQL Server Reporting Services technology is now part of Power BI, creating a unified, secure, enterprisewide reporting platform accessible to any user across devices. Pixel-perfect paginated reports can now be included alongside Power BI's existing interactive reports.

- **Multiple geographies** – New flexibility to deploy Power BI in specific global regions enables organizations to keep data close to users for optimal performance and to meet data residency requirements.
- **Enterprise-scale BI models** – We're integrating the full power of SQL Server Analysis Services into Power BI, expanding the service with a highly scalable platform for semantic BI models. Organizations can provide users with reports that are fast, highly available, and easy to manage, while aligning with their unique compliance requirements. And with incremental refresh and aggregation capabilities, Power BI can query large amounts of data, while still enabling quick, interactive user experiences.
- **Application lifecycle management (ALM)** – New capabilities for enterprise-grade lifecycle management, as well as full API support for datasets through the XMLA protocol to help customers connect a variety of third-party BI tools to Power BI to create a unified enterprise semantic model repository.

Self-service data prep for big data

- **Self-service data prep for big data** – We're expanding self-service data prep in Power BI with new capabilities to help business analysts extract insights from big data. Using the Power Query experience already familiar to millions of Power BI Desktop and Excel users, business analysts can ingest, transform, integrate, and enrich big data with Power BI – including data from a large and growing set of supported on-premises and cloud-based data sources, such as Dynamics 365, Salesforce, Azure SQL Data Warehouse, Excel, and SharePoint. Users can directly map data to known entities, modify and extend existing entities, or create custom entities all within Power BI.
- **Common Data Model support** – We've expanded the familiar Power BI workspace experience to include new tools to easily map your business data to the Common Data Model (Microsoft's standardized schema), enrich it with Microsoft and third-party data, and gain simplified access to machine learning. These new capabilities can be leveraged to provide intelligent and actionable insights into your business data.
- **Advanced analytics and AI with Azure** – We're fueling collaboration across roles by unifying access to data between Power BI and Azure Data Lake Storage Gen2. Business analysts can seamlessly operate on data stored in Azure Data Lake Storage with the self-service capabilities in Power BI, while data engineers, data scientists, and other users can extend access to insights with advanced analytics and AI from complementary Azure Data Services like Azure Data Factory, Azure Databricks, and Azure Machine Learning. For example, data engineers can add, enrich, and orchestrate data; data scientists can build machine learning models; and business analysts can benefit from the work of others and the data available in Azure Data Lake Storage while continuing to use the self-service tools in Power BI to build and share insights broadly.

Self-service data prep with dataflows

Power BI introduces dataflows to help organizations unify data from disparate sources and prepare it for modeling. Analysts can easily create dataflows, using familiar, self-service tools. Dataflows are used to ingest, transform, integrate, and enrich big data by defining data source connections, ETL logic, refresh schedules, and more. Data is stored as entities in Common Data Model compliant folders in Azure Data Lake Storage Gen2. Dataflows are created and managed in app workspaces by using the Power BI service.

You can use dataflows to ingest data from a large and growing set of supported on-premises and cloud- based data sources including Dynamics 365, Salesforce, Azure SQL Database, Excel, SharePoint, and more.

You can then map data to known Common Data Model entities, modify and extend existing entities, and create custom entities. Advanced users can create fully-customized dataflows, using a self-service, low- code/no-code, built-in Power Query authoring experience, similar to the Power Query experience that millions of Power BI Desktop and Excel users already know.

Once you've created a dataflow, you can use Power BI Desktop and the Power BI service to create datasets, reports, dashboards, and apps that leverage the power of the Common Data Model to drive deep insights into your business activities.

Dataflow refresh scheduling is managed directly from the workspace in which your dataflow was created, just like your datasets.

The preview includes more than 20 connectors to common data sources such as Excel, SQL Server, Oracle, Azure SQL Datawarehouse, Dynamics 365, and Salesforce.

Computed entities (Public Preview)

Dataflow entities are stored in Common Data Model compliant folders (CDM folders), in Azure Data Lake Storage Gen2. After your entities have been loaded to CDM folders, you can generate new insights by transforming, modifying, and enriching entities, and aggregating large-scale data. These newly created entities are also stored in CDM folders. Static analysis of Power Query M expressions makes it possible to identify dependencies between entities automatically, so they'll always be updated in the optimal order, with no need for manual orchestration.

Support for computed entities allows third parties to build Power BI apps leveraging dataflows with richer insights and AI capabilities. For example, you could enrich a customer account entity from Dynamics 365 for Sales with information from open service tickets in Dynamics 365 for Service, and relevant customer meeting information from Office 365. Refreshing computed entities requires Power BI Premium.

Linked entities (Public Preview)

Power BI makes it possible to link entities from one dataflow to another without duplicating them. Linked entities can be used in the transformation, enrichment, or calculation of new entities.

Avoiding duplication with linked entities makes it possible to maintain a single source of truth across your organization. Refreshing linked entities requires Power BI Premium.

Dataflow refresh (Public Preview)

Power BI will support advanced dataflow refresh features, including incremental dataflow refresh, to streamline and speed the dataflow refresh process and to support the ingestion of larger data sets. Requires Power BI Premium.

Azure integration (Public Preview)

Azure Data Lake Storage Gen2 is included with every paid Power BI subscription (10GB per user, 100TB per P1 node). So, you can easily get started with self-service data prep on Azure Data Lake.

Power BI can be configured to store dataflow data in your organization's Azure Data Lake Storage Gen2 account. When Power BI is connected to your Azure subscription, data developers and data scientists can leverage powerful Azure products such as Azure Machine Learning, Azure Databricks, Azure Data Factory, and more.

Power BI can also connect to Common Data Model compliant folders created by other Azure services that are stored in your organization's Azure Data Lake Storage account, and analysts can work seamlessly with this data in Power BI.

Dataflows on Premium capacity (Public Preview)

Power BI administrators can easily assign workspaces with dataflows to Premium capacity and manage usage as part of a Power BI Premium subscription. Once capacity is allocated, dataflows will have access to the Power BI Premium storage (100 TB per P1 node), and dedicated capacity. Administrators can track capacity usage, resolve bottlenecks, and scale up capacity as needed.

Dataflows hosted on Premium capacity will support advanced features, such as calculated entities, linked entities, incremental refresh, and more.

Admin APIs and PowerShell module

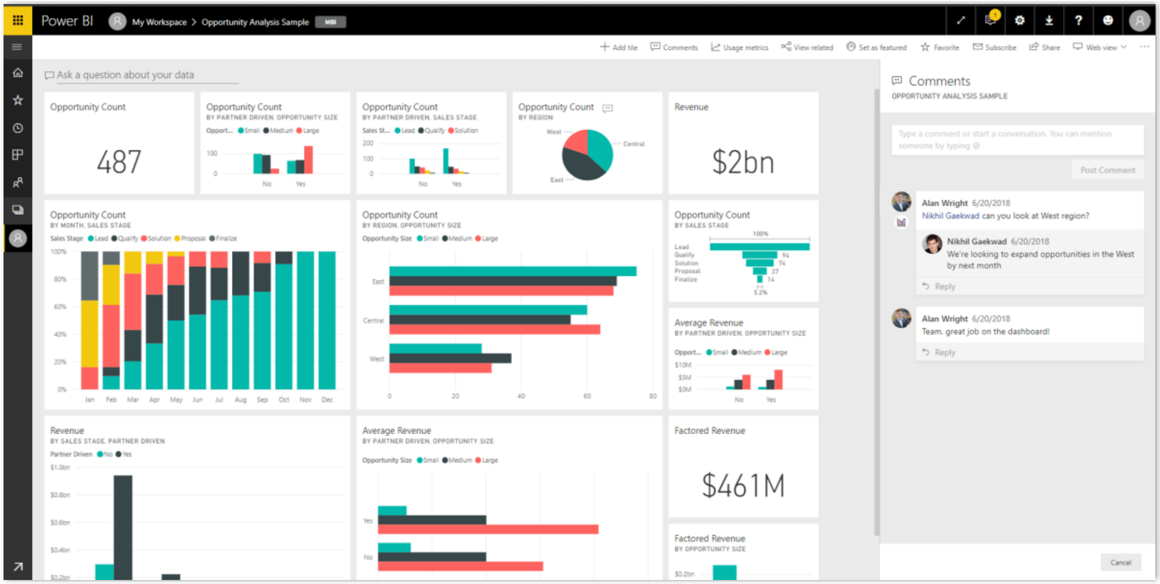
With the Power BI admin APIs, along with a .NET SDK and PowerShell modules, administrators can discover artifacts in their Power BI tenant, as well as take administrative actions. These new capabilities will unlock new possibilities for administrators that go beyond what's currently available in the Power BI admin portal. Over time, we expect to incorporate some of these capabilities into the Power BI admin portal as well, to enable common scenarios without having to use PowerShell.

Additional report URL parameter support

When using report URL parameters, you will be able to set filters for date columns, use new operators (less than, greater than, less than or equal, greater than or equal), and filter on multiple field values.

Commenting

Comment on reports and dashboards to provide context and ask questions. With @mentions, you can engage others in the conversation. Push notifications and emails can keep up to date with the latest replies that mention you or that pertain to your own comments.



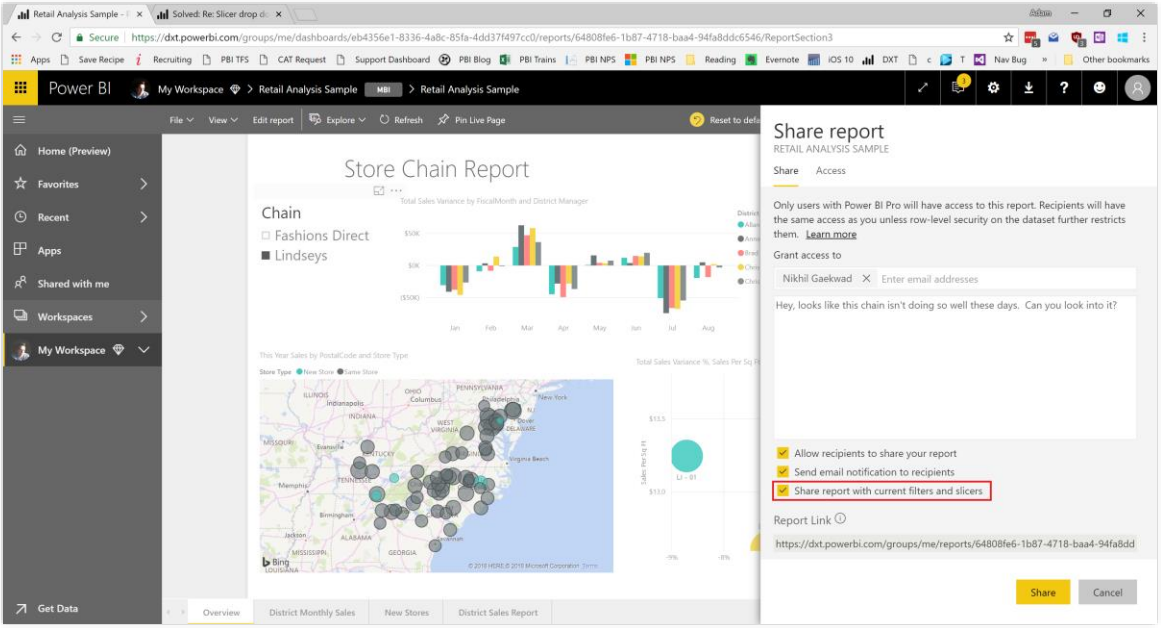
Dataset metadata translations

Power BI users see dataset fields in their client locale or language when translations are defined in the dataset or Analysis Services model.

Filters for report sharing

When sharing a report, the currently applied filters on a report will be used, allowing you to create personalized views tailored for different audiences.

For example, the screenshot below shows how a user can choose to share using the current report filters.



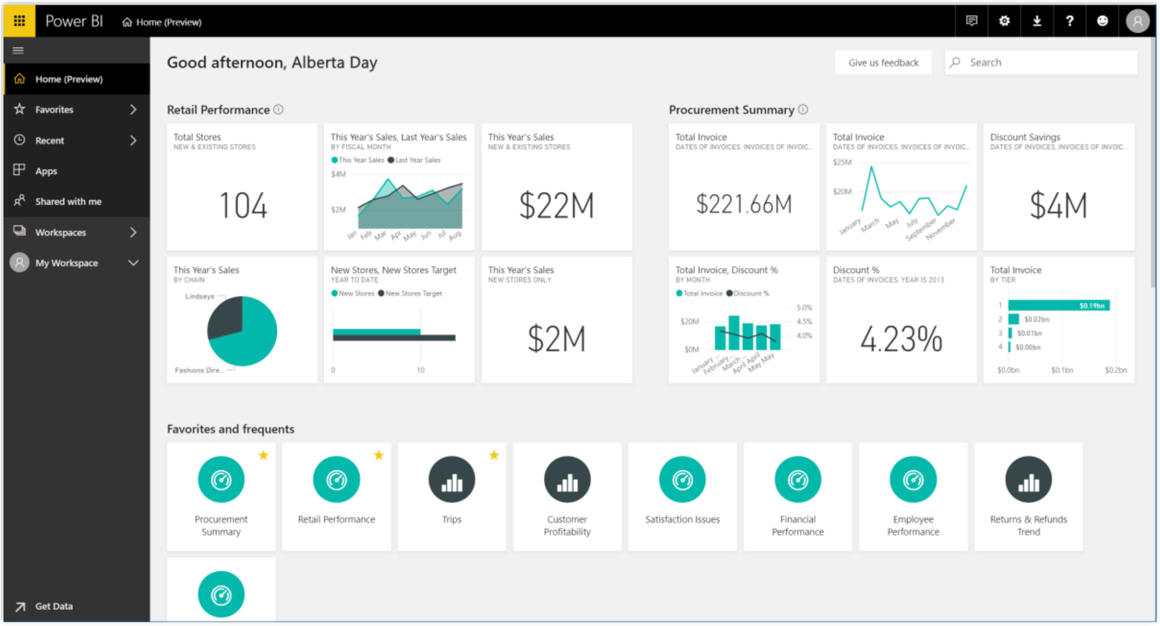
Historical capacity metrics.

Get key insights into the health of your capacity and learn how the usage of your current capacity effects performance of refreshes and queries. See which datasets consume the most resources and when you need to scale up to handle more load.

Power BI Home

Power BI Home provides an at-a-glance view of a user's most important metrics and a launching point to navigate to content. The top section contains tiles and visuals from a user's most important dashboards and reports. Below that, the quick access section provides easy access to favorites curated by the user as well as the most frequently used content from the user's prior Power BI usage. A new global search experience allows users to quickly find content across all of Power BI. For users new to Power BI, Home will contain additional sections with tips on getting started.

Home will be available as an opt-in preview first, but will later become the default landing experience for all users.



Multi-Geo for Compliance (Public Preview)

Power BI today stores data for an organization in a single geographic region. For many customers, especially multinationals, different subsidiaries or departments have specific data residency requirements to meet local laws or contractual requirements with their own customers.

Power BI Premium Multi-Geo for Compliance provides organizations with the flexibility to deploy Power BI around the world as needed. When deploying Power BI Premium capacity, customers will be able to choose to deploy in any of the Power BI geographies in our commercial cloud, independent of the geography associated with their overall Power BI tenant.

The primary benefit is providing data residency. However, over time we aim to enhance Power BI Premium Multi-Geo to provide performance benefits for organizations that have geographically distributed user bases that need fast report rendering.

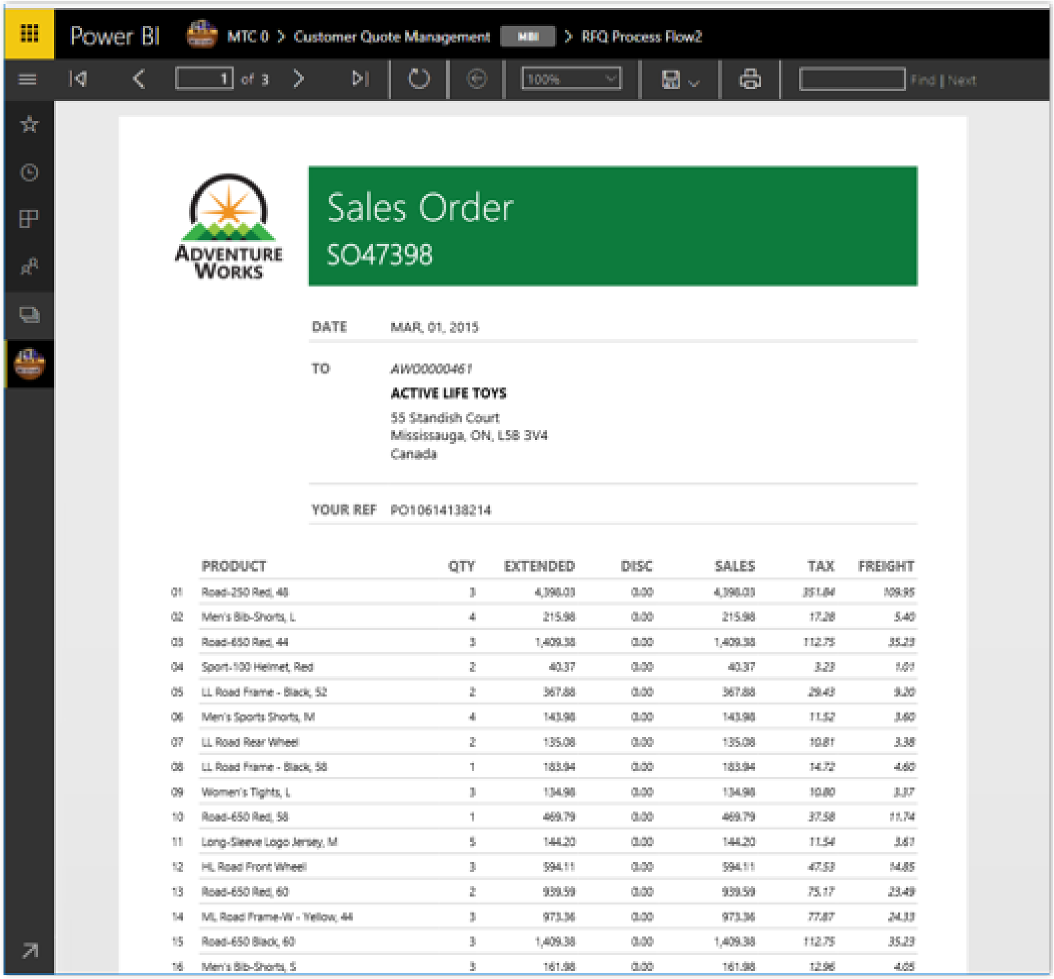
Query acceleration for large datasets (Public Preview)

Users can create DirectQuery models over any size data in sources, such as Spark and Azure SQL Data Warehouse, and then accelerate common queries by building in-memory aggregations over some of the data. Common queries use the aggregated cache to return results in a fraction of a second instead of directly querying the source. Users can create datasets of massive size and still provide interactive querying.

Paginated reports in Power BI (Public Preview)

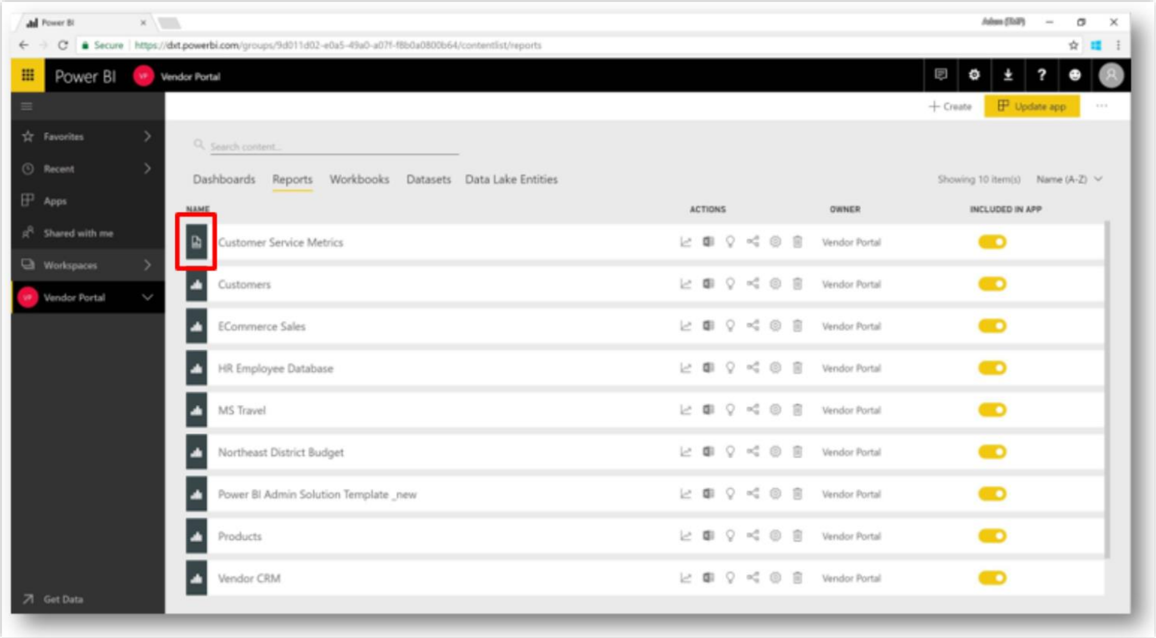
Publish SQL Server Reporting Services (SSRS) reports (*.rdl format) to a Power BI Premium workspace and view reports within the Power BI web app. The reports can be shared or published as part of Power BI apps.

A report will render inside the Power BI web or mobile experience as shown below.



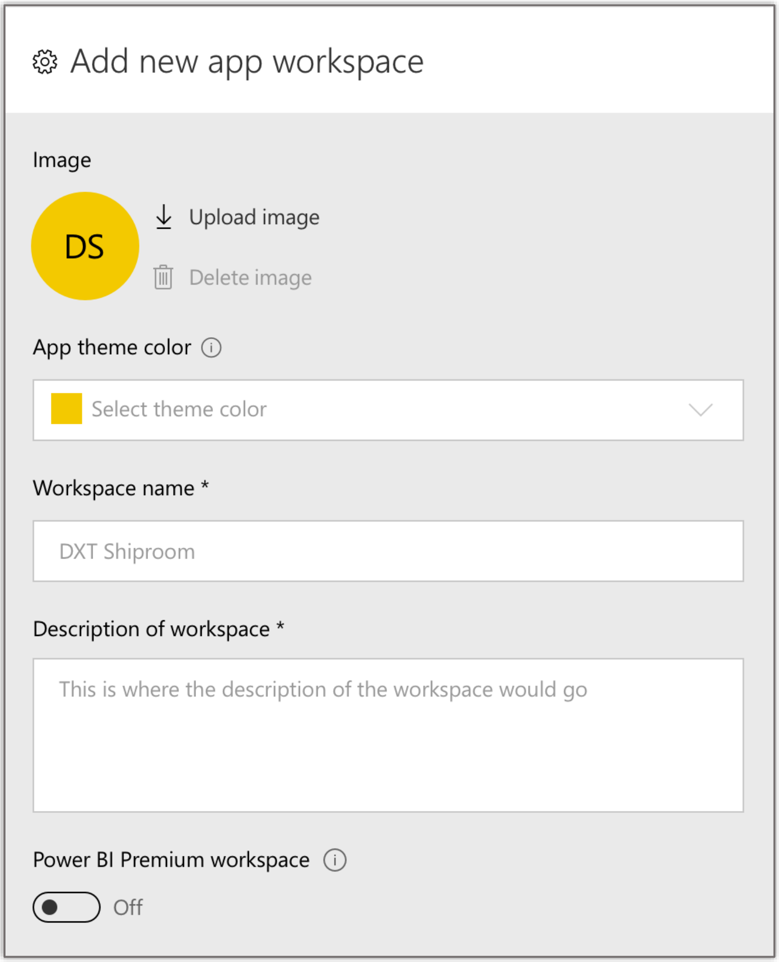
	PRODUCT	QTY	EXTENDED	DISC	SALES	TAX	FREIGHT
01	Road-250 Red, 48	3	4,398.03	0.00	4,398.03	351.84	109.95
02	Men's Bib-Shorts, L	4	215.98	0.00	215.98	17.28	5.40
03	Road-650 Red, 44	3	1,409.38	0.00	1,409.38	112.75	35.23
04	Sport-100 Helmet, Red	2	40.37	0.00	40.37	3.23	1.01
05	LL Road Frame - Black, 52	2	367.88	0.00	367.88	29.43	9.20
06	Men's Sports Shorts, M	4	143.98	0.00	143.98	11.52	3.60
07	LL Road Rear Wheel	2	135.08	0.00	135.08	10.81	3.38
08	LL Road Frame - Black, 58	1	183.94	0.00	183.94	14.72	4.60
09	Women's Tights, L	3	134.98	0.00	134.98	10.80	3.37
10	Road-650 Red, 58	1	469.79	0.00	469.79	37.58	11.74
11	Long-Sleeve Logo Jersey, M	5	144.20	0.00	144.20	11.54	3.61
12	HL Road Front Wheel	3	594.11	0.00	594.11	47.53	14.85
13	Road-650 Red, 60	2	939.59	0.00	939.59	75.17	23.49
14	ML Road Frame-W - Yellow, 44	3	973.36	0.00	973.36	77.87	24.33
15	Road-650 Black, 60	3	1,409.38	0.00	1,409.38	112.75	35.23
16	Men's Bib-Shorts, S	3	161.98	0.00	161.98	12.96	4.05

Paginated reports are managed in Power BI workspaces alongside existing Power BI reports.



Workspaces with Azure AD groups (Public Preview)

Power BI workspaces have their own roles and permissions that are separate from Office 365 groups, and which enable control over management of workspaces. Capabilities include assigning workspace roles to individual users, Azure Active Directory (Azure AD) security groups, and Office 365 modern groups. Additionally, governance of Power BI workspaces is separated from governance of Office 365 modern groups.



A screenshot of how to add a Power BI workspace on mobile

XMLA endpoint for third-party client connectivity and lifecycle management (Public Preview)

With the support of the XMLA protocol for datasets in the Power BI service, customers will have more flexibility in how they deliver and manage their BI deployments. XMLA will allow connectivity to Power BI datasets from third-party applications. XMLA also enables programmatic access to manage and update datasets from scripts or applications you write. Since XMLA is the same protocol used for managing SQL Server Analysis Services and Azure Analysis Services models, a variety of Microsoft and third-party tools for lifecycle management, operations, and management may be valuable for Power BI datasets.

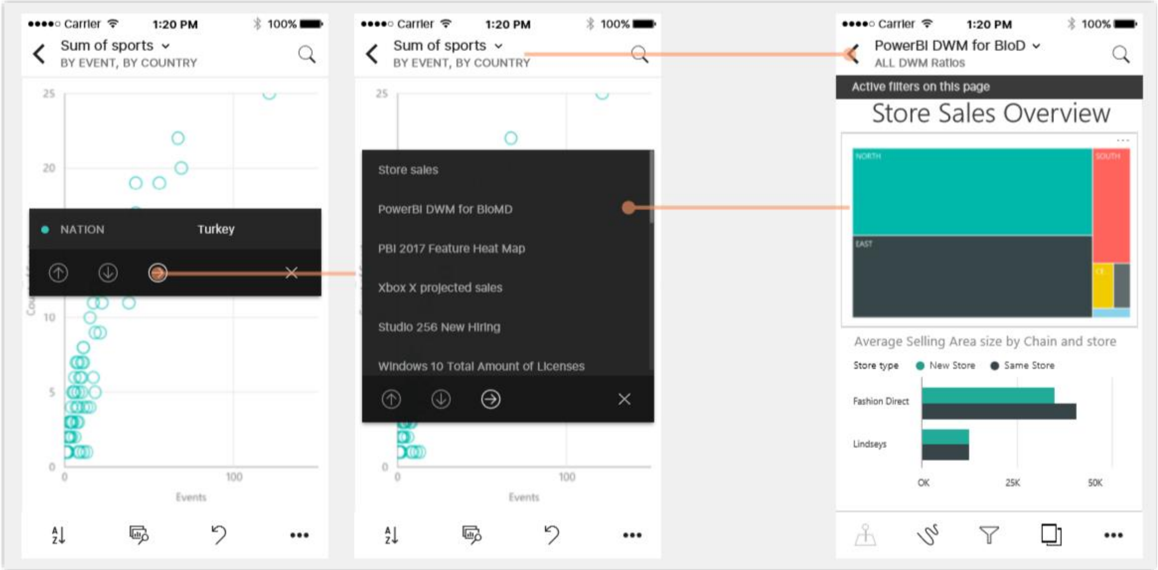
Power BI Mobile

Power BI Mobile apps bring data and insights to any device (Windows, iOS, and Android) to enable business users to securely access and view live Power BI dashboards and reports.

Drillthrough

This feature will allow business users to drill through to a different report page with matching filter context for additional detailed information.

Drillthrough is activated from the visual tooltip. When the user selects a data point and drills through, the data presented is filtered by that value.



Paginated reports (Public Preview)

Paginated reports will become first-class artifacts in Power BI. Users will be able to author paginated reports and publish them to the Power BI service. Mobile users will be able to view paginated reports published in Power BI in their app.

Because paginated reports are first-class artifacts in Power BI, users can add them to their favorites and see them in recent views.

Single sign-on for Windows devices

Power BI can be configured to take the user credentials from the Windows operating system and use them to sign in to Power BI to provide a seamless experience for business users.

This capability is also useful for large screen devices located in conference rooms and collaboration areas, and will not require users of the device to sign in again.

Power BI on Windows-based large screen devices (Public Preview)

Large touchscreens like the Surface Hub are used for data presentation and team collaboration. The Power BI Mobile app on large screens allows you to use the large touchscreen in an intuitive way, with an experience that optimizes the way data is presented and explored on large screens.

The enhanced experience for large screens includes:

- **Chromeless view** – Optimized for data presentation by removing all chrome from all app components (title, filters, visuals borders, navigation) to allow maximum real estate for the presented content. Only the action bar is presented to allow the user to access tools they might need during a presentation for exploration and collaboration (inking, page transition).
- **Proximal filters** – While in chromeless mode, users exploring their data still need access to report filters. Proximal filters is a new concept in which filter options will just pop up on the report upon touch by the user, allowing a fluid exploration experience (instead of having the user reach out to the side of the screen to access them).
- **Single sign-on** – See Single sign-on for Windows devices.

Remote configuration for Power BI Report Server

Manually defining Power BI Report Server connection details is not trivial for most business users. With this feature, IT administrators who manage mobile devices in the organization, or Power BI administrators who manage Power BI apps, will be able to define Power BI Report Server configurations in their Enterprise Mobility Management (EMM) organizational tool.

This configuration includes Report Server's server name, URL, and username. These details will be pushed to the mobile device to set the Report Server configuration automatically. The mobile user will only be prompted to provide a password.

Personalized Home experience (Public Preview)

Power BI introduces a new landing experience: the Home page. In alignment with the service, Power BI app will provide a home view that will enable business users to get a quick view of data they care about, and to easily navigate to that data for additional investigation.

Dashboard-level commenting

Allows business users to start and participate in conversations about their data directly from their mobile app. Conversation can be attached to a dashboard or a tile, and all users that have access to it can contribute to the conversation. Users also can receive mobile push notifications when someone mentions them in a conversation, so they can quickly be updated and reply back to the conversation from their mobile phone.

Mobile shared credentials (iOS and Android)

With shared credentials, Power BI Mobile users (iOS and Android) can sign in seamlessly by sharing the same credentials with Office apps that were already authenticated.

Consuming reports with shared filters (bookmarks)

Sharing insights sometimes requires users to view and share report data filtered in a given way that reveals insights. Today, users can only share reports with a default state as defined by the report's author. With bookmarks, users can share a filtered (and/or sliced) report in a different state, which enables better collaboration on data that needs the user's attention.

When receiving a report shared with a filter (bookmark), the app will load the report with the relevant filtered state and will present the user with an indication that the report is filtered.

Power BI apps

Power BI apps will enable no-code/low-code experiences for Power BI partners to build Power BI apps and publish them in AppSource for all Power BI customers. The platform will help our partners build, market, sell, and grow their business faster.

With the October '18 release, Power BI apps can leverage Power BI dataflows, enabling our partners to expand their offerings with Power BI apps in AppSource. To enable partners to grow their business, we are adding the ability to enforce partner licensing and to monitor an app's usage.

APIs to manage and embed Power BI apps

We will be expanding the ability to manage and embed Power BI apps through APIs and not just through the Power BI service.

Embedding Power BI content from Power BI apps

We are adding the ability to embed reports and visuals from Power BI apps in other services and applications such as SharePoint Online, Microsoft Teams, and Dynamics 365.

Installing Power BI apps for dataflows

Power BI users can jumpstart their solutions by installing out-of-the-box Power BI applications provided by Microsoft and partners. Power BI apps are developed using various Power BI artifacts from the data connectors used to populate a dataflow to the reports that visualize data for the users.

Before using an app, a user needs to run an installer that installs the app into the user's Power BI tenant and configures the various artifacts in the app deployment package, including defining relevant data source connection credentials and configuration.

Licensing enforcement for Power BI apps

The ability to monetize Power BI apps is one of the main incentives to develop and offer these applications to the market. The licensing, set by the application's developers, must be enforced by the platform to avoid abuse and revenue loss. Licensing enforcement is based on users registered and managed in Azure Active Directory as the application's users.

Personalization

After installing a Power BI app, users will have the ability to personalize the application to suit their needs. For example, a user focusing on sales in Europe can personalize the application to process and visualize data for Europe, while another user focusing on North America can personalize it to this specific region.

Create a Power BI app package

As a Power BI Pro user, you can:

- Select a workspace and mark it as the source for an AppSource App.
- Create a package based on workspace content and workspace settings.
- Deploy a package to AppSource as a Power BI AppSource app that can be installed and configured in any other Power BI tenant.

ECMAScript support

The October '18 release introduces support for ECMAScript 2015 SU06 in developer tools that will enable more granular support of external packages.

Update an existing Power BI app in AppSource

The application lifecycle management (ALM) story includes the following capabilities:

- An app is based on a Power BI workspace with additional settings (parameters).
- There are three release levels for an app: workspace (WIP) --> package (release candidate) --> published app (content that is publicly available to install through AppSource).
- On each release level we keep a single version: one workspace in WIP, one package, one published app. To make an update to a published app, you deploy a package. Deploying a package will overwrite the published app in AppSource.
- Building the app can continue at all times on the WIP workspace.
- Whenever you are ready to create a release candidate, save the package.

Power BI custom visuals

Power BI visuals enable development of unique visuals that can be used like any other native Power BI visual.

With the October '18 release, Power BI visuals:

- Continue to support new Power BI features, ensuring custom visuals are on par with core visuals with regard to quality, performance, discoverability, and globalization.
- Add support for Power BI custom visuals in Excel.
- Enable organizations to safely and easily deploy, manage, discover, and use custom visuals internally.

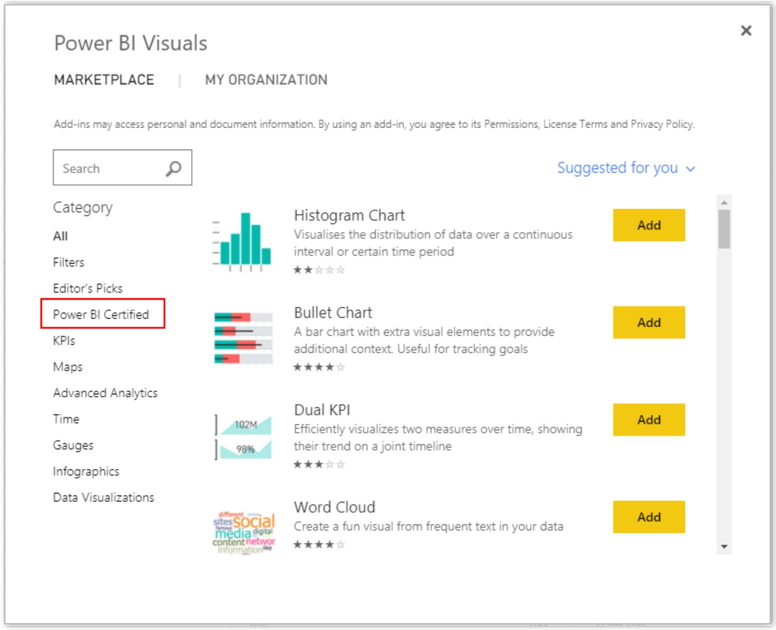
Accessibility support for custom visuals

Custom visuals support high-contrast mode and keyboard navigation for accessibility by adding custom visual support for color themes.

Certified custom visuals in the marketplace

Developers of custom visuals in the marketplace can choose to go through an additional certification process for enhanced security and quality to get a certification from the Power BI team, which will enable the visual to be supported in export to PowerPoint and email subscriptions. In addition, the certification provides reassurance to users that the visuals are safe to use with their data.

Certified custom visuals will be clearly discoverable in the marketplace by filtering with the "Power BI Certified" category, and with a visual mark on the marketplace listing, both in AppSource and in the integrated UI.



Custom visual support for bookmarks

Custom visuals will support the bookmark feature of Power BI. Developers can add code in the custom visuals to handle the creation and retrieval of bookmarks.

Custom visual support for persistent filters

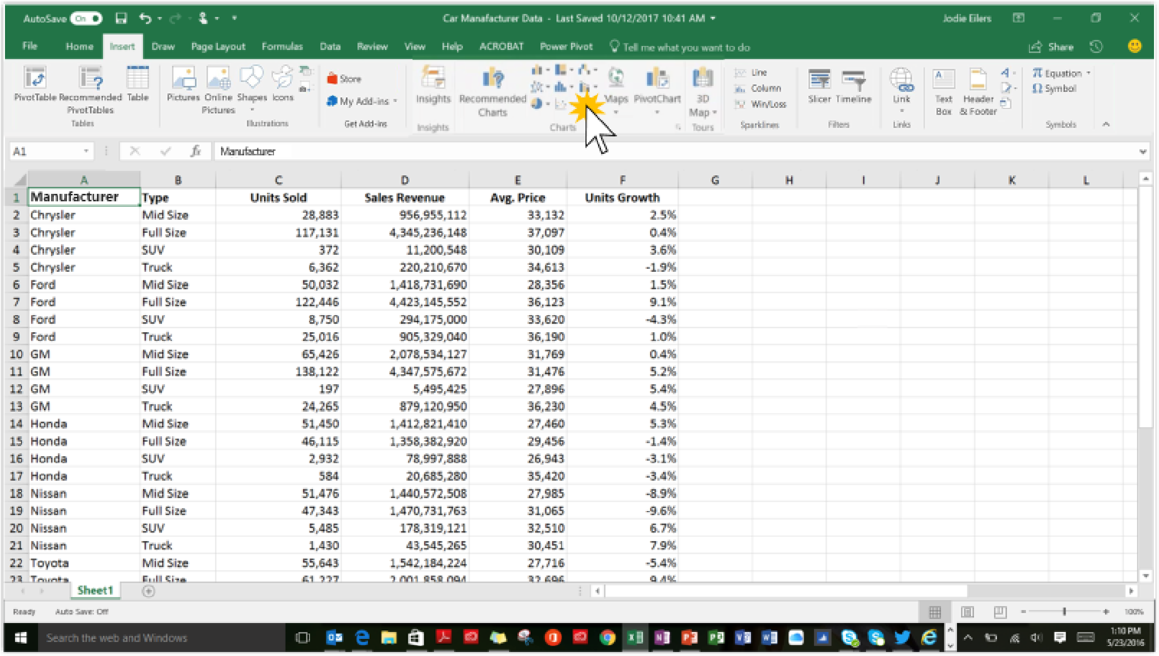
Custom visuals will be supported when users use persistent filters in the Power BI service.

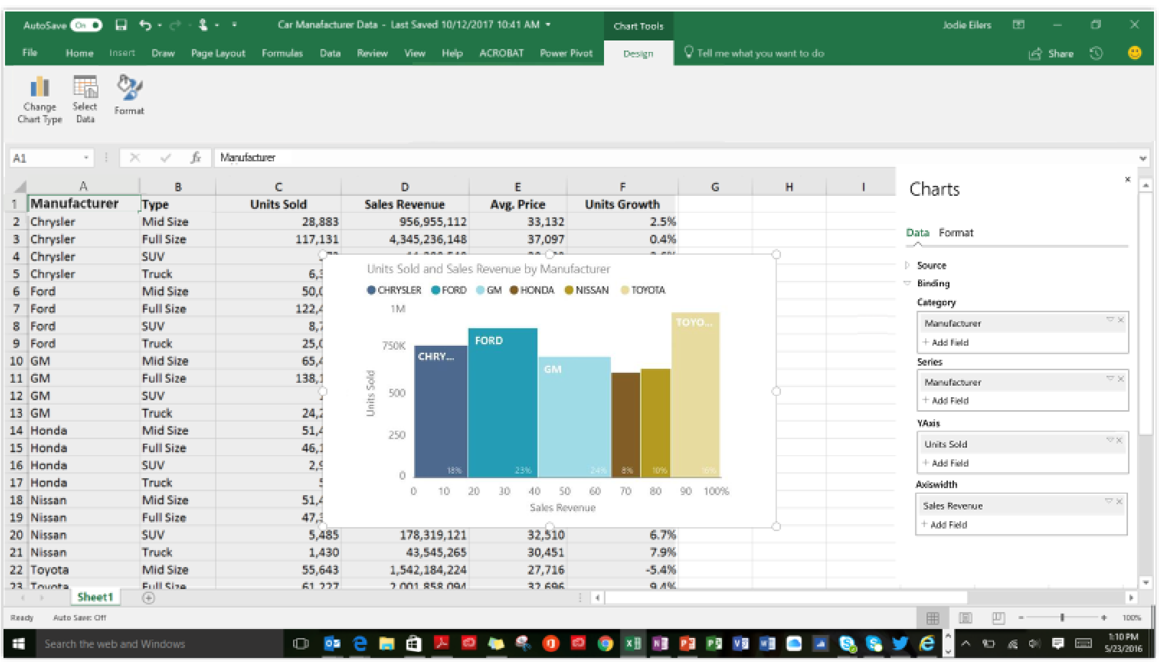
Custom visual support for report tooltips

Custom visuals will support report tooltips in the Power BI Desktop and service.

Custom visuals in Excel (Public Preview)

Custom visuals are the standard mechanism for custom third-party visualizations integrated into Excel's charting experience in Office and Power BI. Custom visuals for Power BI also work in Office. Developers can submit a single custom visual that will be available for both Power BI and Excel in each of the dedicated stores, as well as in AppSource. Excel users can discover and import custom visuals from the Excel store into their Excel sheet, on top of the sheet data.





Organization visuals

[Organization visuals](#) are the way in which Power BI administrators can deploy and manage custom visuals in their organization with support for [Publish to web](#), external sharing, the ability to disable visuals, and edit or update listings.

Performance improvements

We will be bringing custom visual load times for single visuals and multi-visuals to be in the same order of magnitude as core visuals.

Power BI Embedded

Power BI Embedded enables software as a service (SaaS) application developers to seamlessly add Power BI analytics within the applications they develop.

With the October '18 release, Power BI Embedded is:

- Making embedded analytics part of the main flow of an application through a set of APIs that enhance the application user's interaction with analytical objects.
- Integrating with Azure capacity management to enable developers to easily manage and control their Power BI objects or resources in Azure.
- Adding automation for application lifecycle management (ALM).
- Adding a faster, easier onboarding experience for new developers to start using Power BI Embedded.

API to apply and change report themes in Power BI Embedded

This new capability allows applications to call an API to apply and change report themes for embedded objects on a session level. With report themes, you can apply a color theme to an entire report, such as corporate colors, or seasonal coloring. When you apply a report theme, all visuals in your report use the colors from your selected theme.

Applying a report theme requires a JSON file, which you can import into the Power BI Desktop and apply to your report.

Automatic end-to-end deployment of Power BI Embedded solutions

There are multiple deployment scenarios for applications. Two examples are:

- Partners that support multiple tenants.
- Partners that develop an application and deploy it separately for each of their customers.

These new deployment capabilities will simplify the deployment process and the application lifecycle management. The main capability is the ability to copy content between different tenants, which also enables development processes with preproduction and production environments on separate tenants.

Deploy an updated dashboard or tile to production

You can enhance application lifecycle management (ALM) by enabling changes in tiles/dashboards that are already deployed, while preserving their original IDs. Once a dashboard or a tile has been updated to a newer version, the developer can deploy the update into production dashboards by using the 'updateTile' API and stating the source and target tiles.

The content of the tile will be updated, but the IDs will not change, making the update smooth and fast.

Error event logging

In the October '18 release, we are giving Power BI Embedded developers a way to troubleshoot by logging detailed error events to the console on demand, or to their telemetry. The improved experience includes better error messages, indicating root cause, and better documentation explaining the error codes and when there is a need to issue a support ticket.

Improved refresh APIs

We are adding API support for scheduled refresh and incremental refresh, so it can work in an analogous way as the existing refresh API. Developers will be able to activate an API that will initiate refresh on a dataset immediately. For the new API, the refresh will be incremental rather than refreshing the entire dataset.

Power BI Embedded integration with Azure Diagnostics

We are integrating Power BI Embedded with Azure Diagnostics to enable diagnostics of Power BI Embedded along with other Azure resources used by the application. Azure Diagnostics is the capability within Azure that enables the collection of diagnostic data on a deployed application. The Azure Diagnostics extension can transfer this data to an Azure storage account or send it to services like Application Insights. The data can be used for debugging and troubleshooting, measuring performance, monitoring resource usage, traffic analysis and capacity planning, and auditing.

Power BI Embedded integration with Azure Service Health

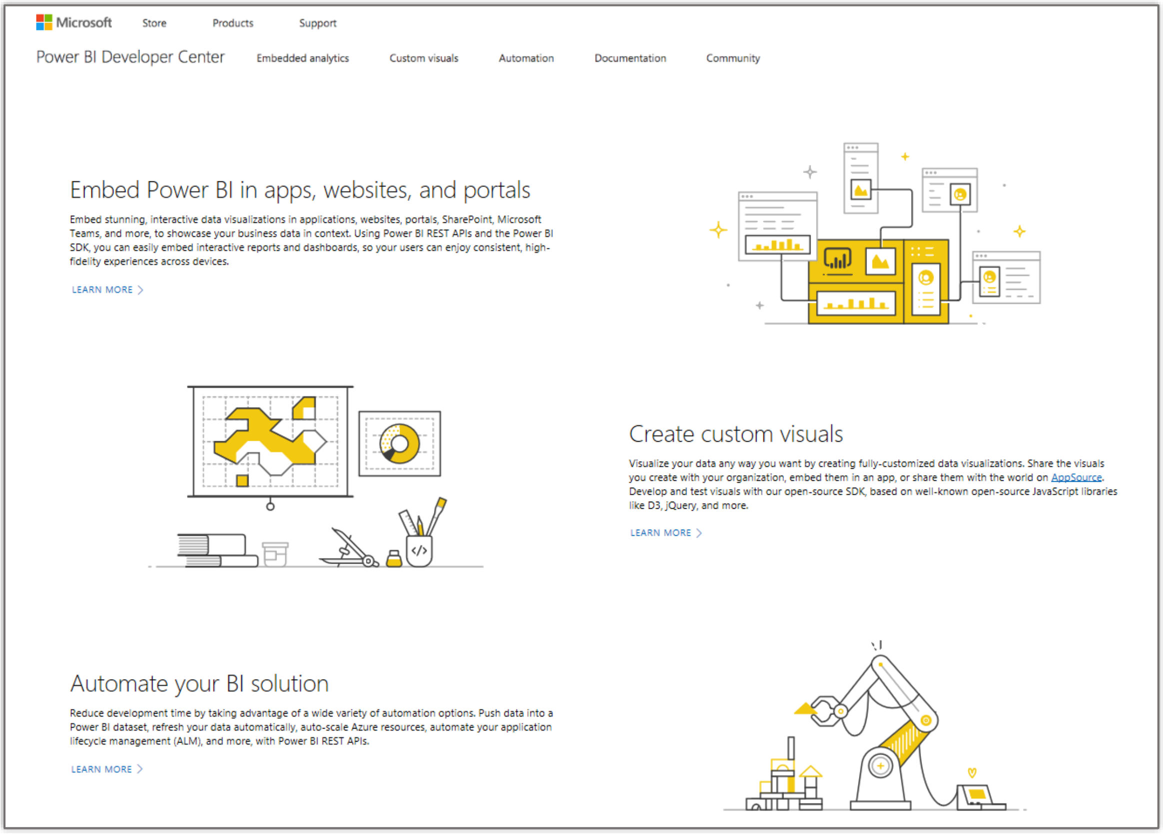
We are adding the ability to use Azure Service Health to track the availability of Power BI Embedded resources. When issues in Azure services affect your business-critical resources, Azure Service Health notifies you and your teams. It helps you understand the impact of the issue, and keeps you updated as the issue is resolved. It also helps you prepare for planned maintenance and changes that could affect the availability of your resources.

Multi-region support for Power BI Embedded (Public Preview)

Power BI Embedded customers can purchase capacity in multiple regions, including regions other than the region where their Power BI home tenant resides. This capability gives customers control of where data resides, since they can assign workspaces and all the data in the workspace to be in a specific region, ensuring the data remains inside the region.

New developer portal

A new developer portal for Power BI developers contains all the resources that developers need to work with Power BI Embedded, automate processes for their Power BI solutions, and build custom visuals. The portal includes links to relevant documentation.



New metrics for Azure load monitoring

Four new metrics were added to monitor Power BI Embedded resource consumption and trigger actions when configurable thresholds are exceeded:

- Memory consumption
- Memory thrashing
- CPU spikes over 80 percent
- DirectQuery usage

Developers can use Azure to define thresholds to trigger specific actions using alerts, such as automatic scale-up of the resource whenever a specific monitor crosses a defined threshold.

Power BI Embedded single sign-on for Azure SQL Database

This enables Power BI Embedded to respect security settings that are configured at the data source level. Power BI Embedded has no awareness of the application's user. For applications that want to set row-level security in Azure SQL Database, there is a need to pass the application's user information to SQL Database. By enabling the single sign-on option, Power BI Embedded sends authenticated Azure Active Directory credentials for users accessing reports in the queries to the Azure SQL Database.

Azure Active Directory application authentication (Public Preview)

We are adding application authentication to Power BI Embedded. This will enhance the deployment, security, and application lifecycle management Power BI Embedded applications. Currently, building a Power BI Embedded application requires the creation of a master user account, storing the credentials for that account, and then using them in the application code for performing non-interactive sign-in to Power BI. Azure Active Directory has special support for applications authenticating using their own identity without a user context. This support, designed for app-only authentication, allows higher control and security, has fewer limitations, and is the recommended approach.

Visual configuration for Power BI Embedded

The visual is an integrated part of the application. As such, we are enabling the application to control which visual functionality and experiences the end user will be exposed to. The default behavior is to expose all the Power BI capabilities:

- Show in Focus mode
- Export data
- Show data
- Spotlight

The application will have the control to enable all or some of the capabilities, as well as decide whether to show the upper bar on the visual. We also allow these settings to be configured for each visual separately.

Workspace Collections deprecation

The Power BI Workspace Collections service is being retired. You can now embed more Power BI features in your apps using Power BI Embedded. As of June 30, 2018, visuals embedded using Power BI Workspace Collections are no longer viewable within your apps. Application data will be available within the Power BI Workspace Collections service for six months. By transitioning to Power BI Embedded, your app users will still be able to view embedded visuals, and you'll have continued access to your data. Any Power BI Workspace Collections customers with an EA signed prior to June 30, 2017, will retire on the date their EA expires.

Upgraded workspaces (Public Preview)

Remove workspace limitations by detaching from Office 365 Groups and sharing via security groups. We will add support for all existing APIs to work with workspaces as well as groups for backward compatibility. This work will make the transition smooth and transparent to developers.

Enable an application to programmatically use slicers

The slicers API will give the application control, throughout the session, of the slicers the user interacts with. The API will be like the filters API so that it will be easy and intuitive for the developer. The supported capabilities are:

- Get slicers value
- Set slicers value on load
- Set slicers value during the session
- Get the value of the user's applied slicer

Power BI Report Server

With the Power BI Report Server, customers can meet their unique governance and deployment requirements while enjoying modern Power BI reports. In the October '18 update to Power BI Report Server, customers will benefit from many of the features released in Power BI Desktop over the previous months, including drillthrough on measures, and conditional formatting based on another column.

In addition, the Power BI Report Server will support other capabilities to address common enterprise reporting scenarios such as:

- **Support for new features of Power BI reports.** Many of the features added to Power BI Desktop for report creation may be available for reports published to the Power BI Report Server.
- **Row-level security (RLS).** Support for user-based security with RLS for reports published to the Power BI Report Server to restrict the data seen by each user, and compartmentalize sensitive information within the organization.
- **Export to Excel.** Ability to export data to Excel from a tabular visual in the Power BI Report Server so that users can analyze data on their own.

Azure Analysis Services

Azure Analysis Services offers the proven analytics engine of SQL Server Analysis Services as a fully managed hosted service.

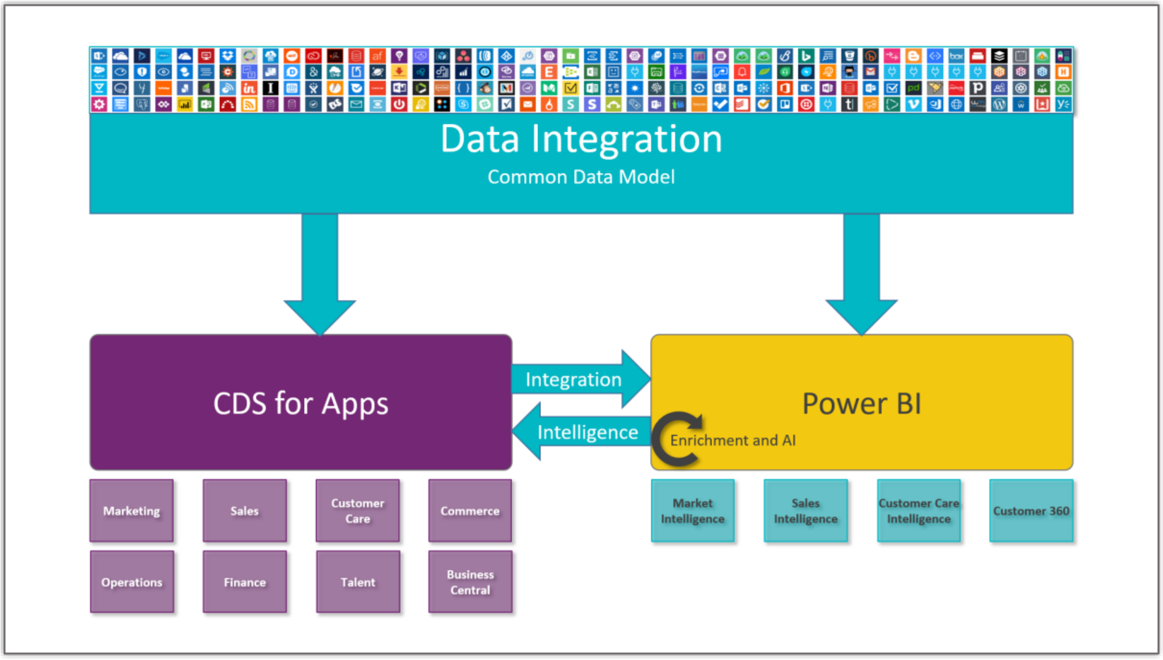
New features in the October '18 release include:

- **Resource governance.** The ability to set maximum memory size per query and maximum number of rows for results to improve your ability to control resource utilization.
- **MDX column controls.** Turn off MDX usage of certain columns to dramatically reduce processing times and memory consumption.

Data integration

Overview of Data Integration Platform October '18 release

Data Integration provides the connectors and gateways that make it possible to bring any external data into the Common Data Service (CDS) and store the data in Common Data Model (CDM) form. This makes it easier for customers to integrate their data in a single place for business applications and analytics. Data Integration is based on Power Query, the same technology that millions of people use daily in Power BI and Excel.



Data Integration Platform overview

Data Integration provides direct connectivity to hundreds of business-critical data sources as well as:

- Hybrid connectivity via the on-premises data gateway.
- Integration into Power BI, PowerApps, Logic Apps, Microsoft Flow, Azure Analysis Services, and Office 365 (Power Query in Excel).

Improvements to this platform functionality enable richer connectivity to various Microsoft and third-party applications and services. There are key innovations in the following areas:

- Simpler, smarter transformation and integration of enterprise data with Power Query and Data Integration Platform

- Easier sharing, unification, and enrichment of data with Common Data Model entities
- Richer and more unified connector and developer ecosystem
- Enhanced administrator capabilities for Data Integration
- Enterprise-grade hybrid connectivity using the on-premises data gateway

Product	Features	Release type	Target release month

Power BI	New and Improved Connectors
	• Full support for the OData v4 protocol
	• HDInsight Spark Connector General Availability
	• Google BigQuery Connector General Availability
	• SAP HANA
	  o SSL Certificate Validation support in Power BI Service (via Gateway)
	  o SAML-based Single Sign-On (including Power BI Desktop & Gateway)
	• SAP BW
	  o Performance Enhancements
	  o Additional DirectQuery metadata (properties, currency, units of measure)
	  o Certification
	• Spark (non-HDInsight) Connector Single Sign-On in Power BI Desktop + Service (via Gateway)
	• New PDF Connector
	• HTML Connector Enhancements (Data Extraction By Example)
	• Spark (non-HDInsight) Connector General Availability
		General Availability	October 2018

Power BI	Support for certified custom connectors in Get Data experience	General Availability	October 2018
Power BI	Improved Custom Connector development documentation including content for ODBC developers	General Availability	October 2018
Power BI	"Fuzzy Merge" & "Fuzzy Replace" Transformations	General Availability	October 2018
Power BI	New and Improved Connectors • AtScale connector • Essbase connector	Public Preview	October 2018

Product	Features	Release type	Target release month
On-premises Data gateway	Support for custom connectors in the personal and enterprise gateway	General Availability	October 2018
On-premises Data gateway	Support for gateway with Power BI premium in different capacity regions	General Availability	October 2018
On-premises Data gateway	Guarantee high availability of gateways via clustering	General Availability	October 2018
On-premises Data gateway	Improved Kerberos single sign-on support	General Availability	October 2018
On-premises Data gateway	SAML-based single sign-on for supported data sources	General Availability	October 2018
On-premises Data gateway	Additional data sources capabilities that exist in Power BI Desktop	General Availability	October 2018
On-premises Data gateway	Improved data sources settings experience	General Availability	October 2018
On-premises Data gateway	Ability to manage all the tenant's gateways in the D365 admin portal	General Availability	October 2018
On-premises Data gateway	Traffic load balancing in the on-premises data gateway	Public Preview	October 2018
CDS for Apps and Power BI dataflows	Support for File Upload as part of File Connector experiences	Public Preview	October 2018
CDS for Apps and Power BI dataflows	Ability to browse cloud-based File Storages (OneDrive Business, OneDrive Personal and SharePoint Team Sites)	Public Preview	October 2018
CDS for Apps and Power BI dataflows	Support for Custom Connectors (via Gateway)	Public Preview	October 2018
CDS for Apps and Power BI dataflows	Support for top enterprise relational connectors	Public Preview	October 2018

Product	Features	Release type	Target release month
CDS for Apps and Power BI dataflows	Support for in-lake Data Transformations	Public Preview	October 2018
CDS for Apps and Power BI dataflows	GDPR (Ability to export user data, ability to audit all CRUD operations by a user, DPIA document)	Public Preview	October 2018
CDS for Apps and Power BI dataflows	Improvements for Data Integrator Admins • New experience in Business Platform Admin Center • Grade-C accessibility compliance • Ability to create support tickets from within the admin portal • Improved review of historical records (pagination in execution history)	Public Preview	October 2018
CDS for Apps and Power BI dataflows	New and improved template features • New Salesforce template to import data into CDS for Apps and Power BI dataflows • Additional new data integration templates • Improved ability to customize templates (creation of empty project without selecting existing template) • Support for versioning • Validating destination and source solution(s) • Ability to create a DI project from the published templates in marketplace(starting from DI or from marketplace) • Sharing for templates across and within tenants	Public Preview	October 2018
CDS for Apps and Power BI dataflows	Centralized setup experience for DI (prevent switch between maker/admin portals)	Public Preview	October 2018
CDS for Apps and Power BI dataflows	Performance improvements including data and batch parallelism	Public Preview	October 2018
CDS for Apps and Power BI dataflows	Ability to kill running execution	Public Preview	October 2018
CDS for Apps and Power BI dataflows	Improved documentation including common patterns guide (workaround to common challenges) and scalability guidelines	Public Preview	October 2018

Product	Features	Release type	Target release month
CDS for Apps and Power BI dataflows	Ability to share projects within tenant		
CDS for Apps and Power BI dataflows	Richer dashboard with meaningful insights from integration data and additional integration related stats	Public Preview	October 2018
Microsoft Flow and PowerApps	Use sample data in triggers for top connectors	General Availability	October 2018
Microsoft Flow and PowerApps	Improved connectors • Oracle Database (General Availability) • MQ (General Availability) • Excel Online • Support for update operation • Support for built-in keys for Cognitive Services APIs, Microsoft Translator, Bing Search and Bing Maps	General Availability	October 2018
Microsoft Flow and PowerApps	Support for new regions: • US Government (GCC) • Brazil	General Availability	October 2018

Microsoft Flow and PowerApps	New and improved connectors
	• Oracle Database
	  ○ Support for stored procs
	  ○ Support for materialized views
	• Azure SQL Data Warehouse
	  ○ Support for write operations
		Public Preview	October 2018

Microsoft Flow and PowerApps	Support for policy templates in custom connectors	Public Preview	October 2018
Microsoft Flow and PowerApps	Power Query support for reshaping data in Microsoft Flow (with the SQL Server connector)	Public Preview	October 2018
Power Query	Community Website Launch	General Availability	October 2018

Product	Features	Release type	Target release month
Power Query	Data profiling capabilities to easily identify errors and outliers as part of the Data Preparation workload	General Availability	October 2018
Power Query	Intellisense Support for M language	General Availability	October 2018
Connector Platform Extensibility	Consolidated cnnector certification program for partners to certify and release connectors for all products in the platform (Power BI, Microsoft Flow, PowerApps and CDS)	General Availability	October 2018
Connector Platform Extensibility	Support for custom connectors using the Power Query SDK to enable signing, versioning, and dependencies	General Availability	October 2018
Connector Platform Extensibility	Improved development and validation tooling for M, OpenAPI and OData based connectors	Public Preview	October 2018
Common Data Model	Improved CDM documentation explaining the value proposition and providing prescriptive guidance for building extensions	General Availability	October 2018
Common Data Model	Interactive, graphical Common Data Model entity explorer, with CDM GitHub enhancements	General Availability	October 2018
Common Data Model	Initial CDM entity packs for industry solutions such as healthcare, financial services, and retail	Public Preview	October 2018
Common Data Model	Additional CDM entity definitions covering key scenarios from popular Dynamics offerings including Finance, Operations, and Marketing	Public Preview	October 2018

Simpler, smarter transformation and integration of enterprise data with Power Query and Data Integration Platform

We have simplified common data integration problems in enterprises by innovating in:

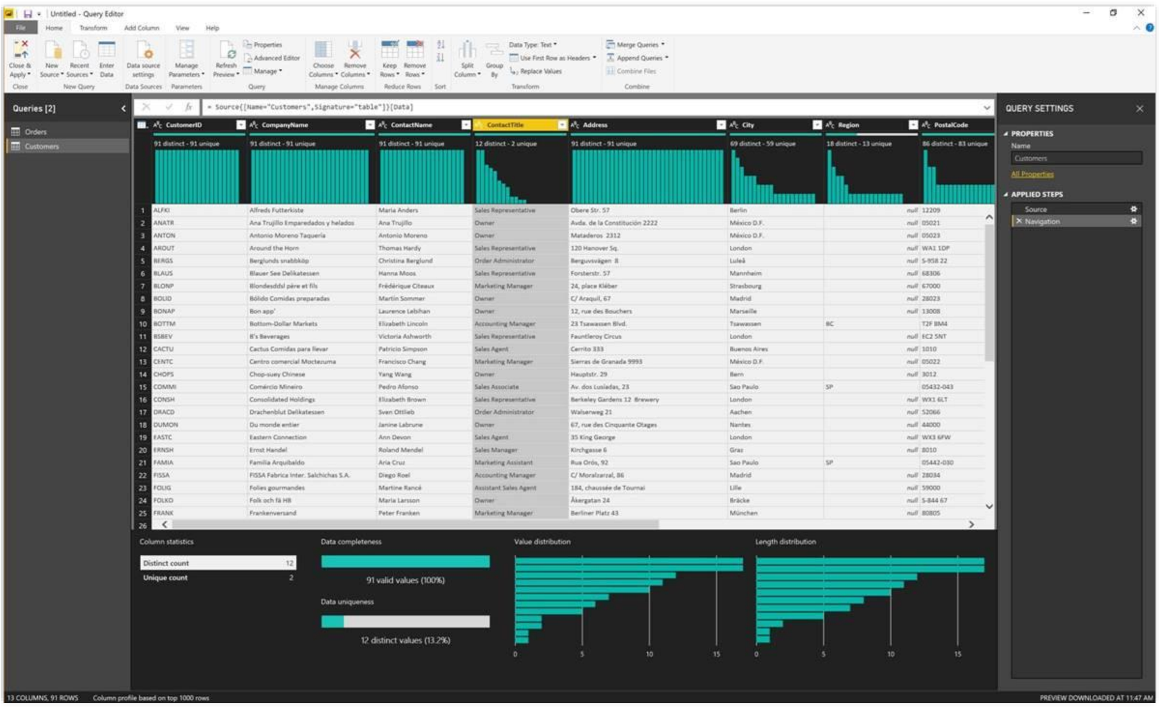
- New Power Query data preparation capabilities.
- Enterprise-grade connectors.
- Improvements for Common Data Service data integration.

New Power Query data preparation capabilities

Power Query is being dramatically enhanced with market-leading *Smart Data Preparation* experiences, including:

- Data extraction from semi-structured sources like PDF files.
- HTML pages.
- Fuzzy-matching algorithms to rationalize and normalize data based on similarity patterns.
- Data profiling capabilities.

These abilities help to easily identify errors and outliers as part of the data preparation workload in the Power Query Editor.



Microsoft is leveraging its leadership in the artificial intelligence field based on years of investment in several projects within Microsoft Research, and surfacing these Smart Data Preparation capabilities in Power Query, making them easily accessible to millions of business users across different Microsoft products and services (Excel, Power BI, Common Data Service for Apps, and Microsoft Flow).

Intelligent transforms and AI support in Power Query

Business analysts can easily incorporate AI-driven insights with a single-click access to AI-based transforms. Initial capabilities in this area will include sentiment analysis and keyword extraction from natural language text. Additional capabilities such as OCR and image analysis could be added over time.

Analysts and BI Pros will gain access to new out-of-the-box functions and APIs for AI transformations. This facilitates column transformations for sentiment analysis and keyword extraction with a click of a button, or with a single line of script, such as "ApplySentimentIndex([textResponse])".

The Power Query APIs will also be supported for use during installation and configuration of Power BI applications making use of dataflows. In this instance, batch-processing of the transforms for the column will be directed seamlessly to a Cognitive Services container running as part of a customer's Power BI Premium capacity.

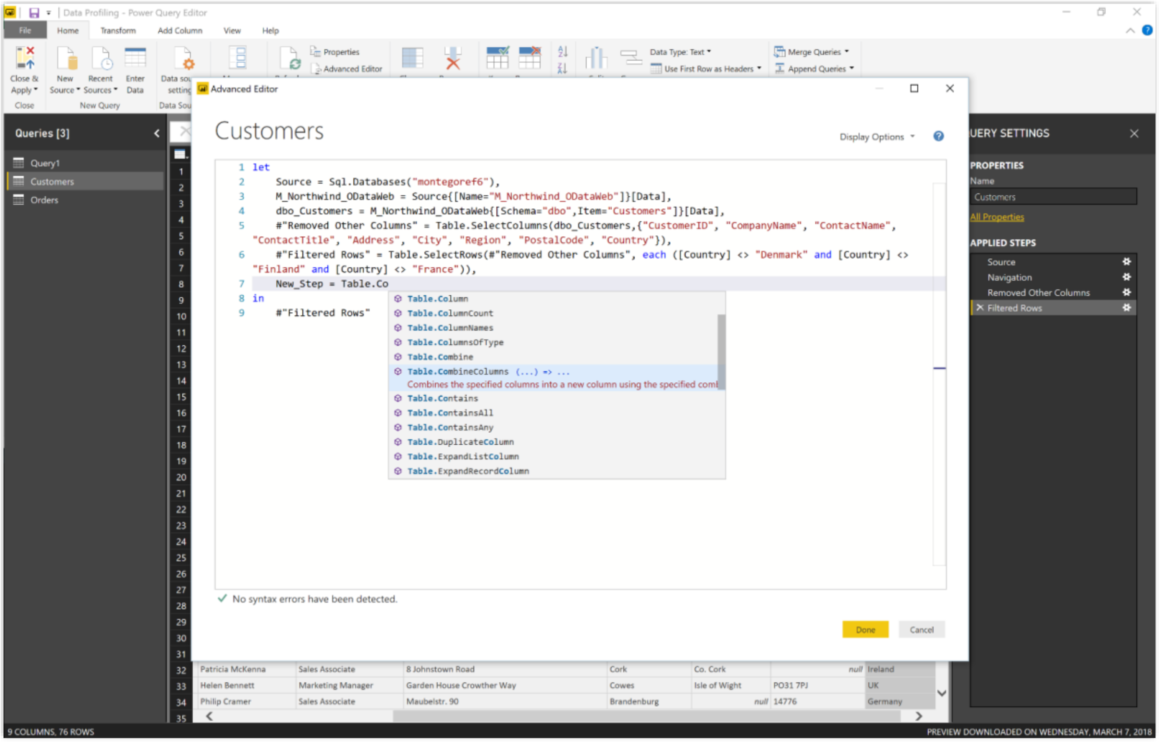
Analytic and ML extensibility with scripting

We currently support the use of R scripts for custom modeling and visualization in Power BI. These R scripts can also be executed as part of data refresh in the Power BI Service leveraging the on-premises Data gateway (personal mode) with the option to plug in custom R libraries.

Python has gained widespread adoption among developers and data scientists. It is the de-facto standard for data analysis and AI-related work due to its large support for useful libraries. As the next step, Power BI Desktop is adding support for Python scripting.

Intellisense support for the M formula language

Intellisense support for the M language editing experiences (Advanced Query Editor, Add Custom Column, and Formula Bar) is being added to the Power Query Editor, making users more successful in editing their M code directly, being able to easily find errors, discover M library functions, and understand what parameters are needed. M Intellisense support is among the most requested features from intermediate-to-advanced Power Query users in the last couple of years and remains at the top of the feature asks for Power Query in the Power BI and Excel feature suggestions forums.



In addition to new core capabilities within Power Query, Microsoft is also extending the range of products and services that leverage Power Query. Over the past six months, Power Query Online has been integrated with Microsoft Flow.

Flow support for data filtering and mashup

Microsoft Flow now integrates with Power Query Online, allowing users to "Get Rows using Power Query," which enables data filtering and mashup as part of the "Get Rows" action on specific connectors, such as SQL Server.

Power Query community website

A new Power Query community website has been launched. It includes Power Query technology overview and deep dive articles as well as forums, UserVoice, and community-driven content (blog posts, webinars). This new community focuses on the core Power Query technology aspects that enable partners to build new connectors and data transformations on top of the platform, and complements the previously existing product-based resources (Excel, Power BI, PowerApps, and more), which cover specific Power Query integrations from an end-user perspective.

Enterprise-grade connectors

The Data Integration team continues to contribute to enterprise-grade connectors across Power BI, Common Data Service for Apps, PowerApps, Microsoft Flow, and Logic Apps.

For Power BI, Microsoft is releasing significant enhancements to their SAP Business Warehouse connectors (Application Server and Message Server), which put Microsoft Power BI at parity or, in some cases, ahead of any other third-party BI vendors in terms of connectivity to SAP Business Warehouse (BW).

SAP has **certified Microsoft's connectors for SAP HANA and SAP BW.** In addition, the SAP HANA connector has been improved to enable large enterprise capabilities, such as Security Assertion Markup Language (SAML) based single sign-on and SSL certificate validation. The SAP BW connector is being significantly enhanced with a new implementation that provides orders of magnitude better performance as well as additional capabilities.

Other connector improvements will include single sign-on support via Kerberos for Spark on-premises and releasing existing connectors as generally available, including **HDInsight Spark, Google BigQuery, Spark (non-HDInsight)**, and more.

There have also been improvements to the connectors within PowerApps, Microsoft Flow, and Logic Apps such as releasing write capabilities for Azure SQL Data Warehouse, numerous Visual Studio Team Services updates including better triggers and support for custom fields, and additional capabilities in the Oracle connector and many more.

The platform continues to evolve and has added new connectors that work consistently across Common Data Service for Apps, Power BI, PowerApps, Microsoft Flow, and Logic Apps, part of an effort to better align customer experiences across the full suite of products.

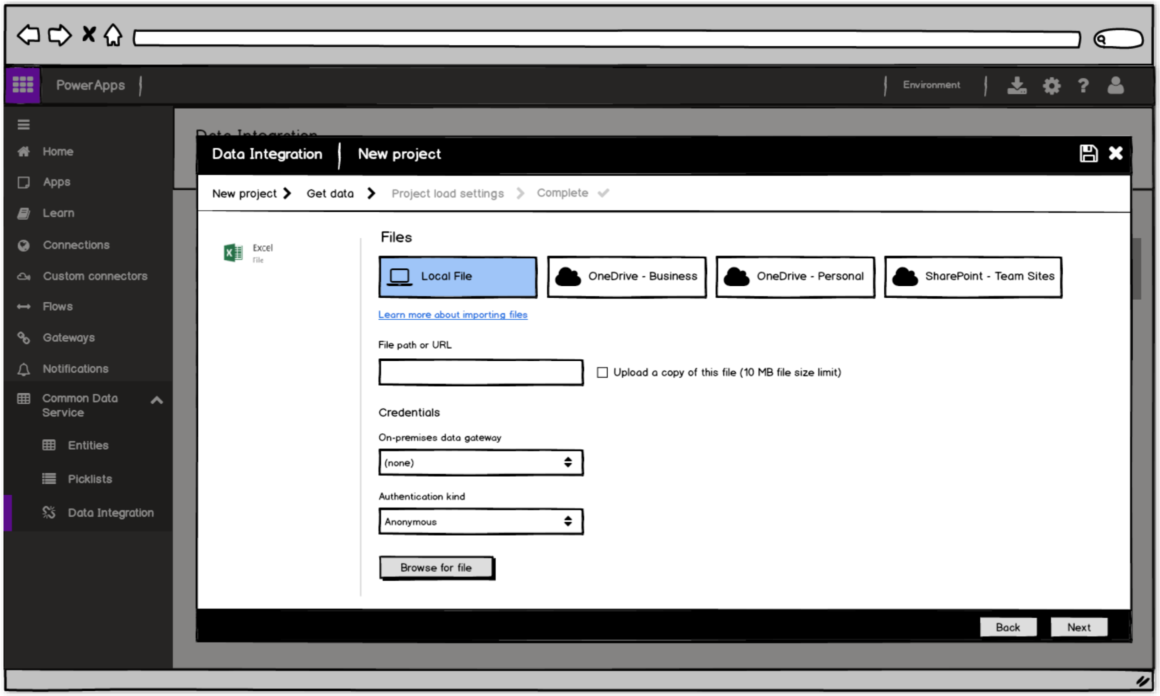
Improved connectors and import experiences for CDS data integration

In April 2018, Microsoft unveiled a public preview of Common Data Service for Apps. As part of this preview, there were built-in capabilities for business users to import data from a wide range of data sources from Microsoft and third parties in the cloud and on-premises, leveraging a web-based, no-code/low-code Power Query experience that users are already familiar with from Excel and Power BI Desktop.

In the next six months, Microsoft will continue expanding support for data connectors and data transformations in this web-based Power Query experience, including support for business-critical data sources (on-premises and cloud), such as Oracle, Amazon Redshift, Google BigQuery, Impala, and others.

Microsoft is also adding support for custom connectors (based on the Data Connector SDK) in Power Query Online, so existing custom connectors built by partners can also be leveraged for data integration with Common Data Services for Apps and Power BI dataflows.

The user experience for importing data from files in Power Query Online is also being improved by allowing users to upload local files, which is a common request.



Likewise, Microsoft will enable browsing in Power Query for files in popular cloud-based file storage services, such as OneDrive Business/Personal and SharePoint Team Sites.

Certified custom connectors in Power BI Desktop

In April 2018, Microsoft released the first custom connectors in Power BI, leveraging the powerful capabilities of the M language to allow partners to write their own connectors and distribute them to every Power BI user. Now any user can easily access connectors from all their data sources, and vendors can easily write new connectors as their own customers demand, improving Power BI's role as the best BI platform for both vendors and end users.

In May 2018, this was brought in line with the existing Get Data experience, making the experience seamless with existing, out-of-the-box connectors, and enabling the number of connectors available with a single click to increase dramatically.

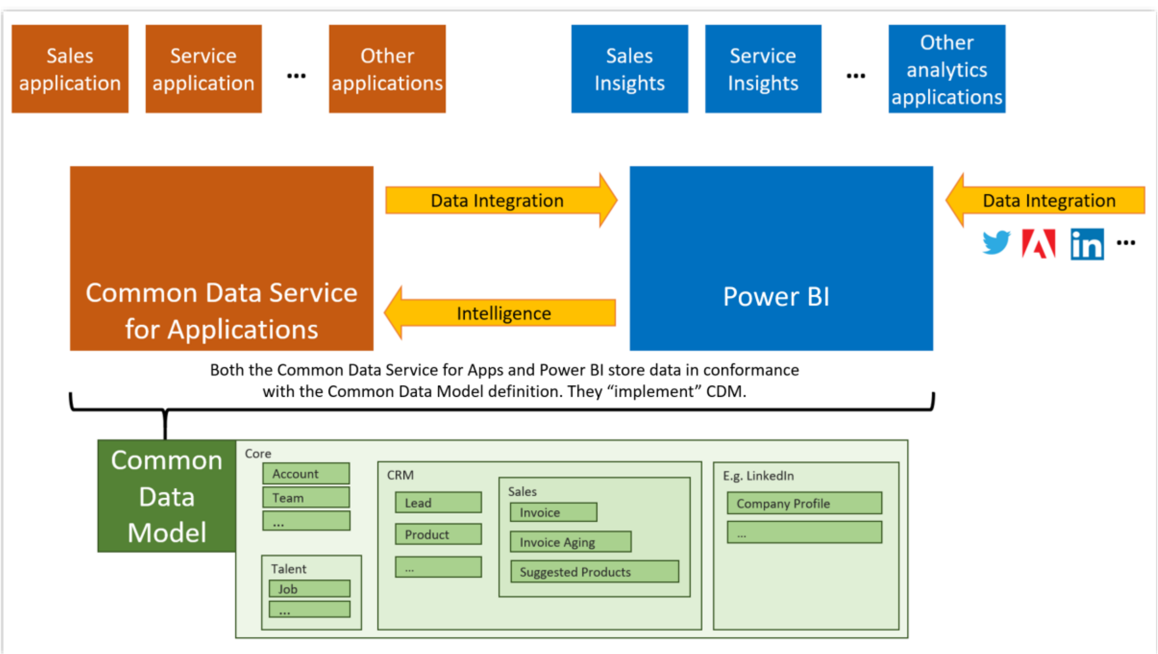
Easier sharing, unification, and enrichment of data with Common Data Model entities

The open-source **Common Data Model** definition of standard entities has been enhanced for the **integration of business processes, applications, and profile enrichment** across sales, services, marketing, operations, finance, talent, and commerce business functions, as well as core entity profiles for customers to support observational data enrichment and analysis.

The Common Data Model (CDM) enables unification of data in a well-known form with structural and semantic consistency across applications and deployments. There is a **large and growing collection of solutions that work together efficiently** when data is stored in the Common Data Model form. This sharing of data and insights means you can quickly implement new business processes, analytical solutions, and gain a true 360-degree view into your business operations without complexity.

Since the initial release in March 2018, the public Common Data Model GitHub repository has grown substantially to several hundred well-defined, modular, and extensible business entities, including major extensions to support additional vertical industries in close collaboration with strategic partners. Improved documentation and presentation content allows customers and partners to better understand and use the Common Data Model. The no-code/low-code data integration, transformation, and enrichment experiences with Power Query continue to support and implement the CDM.

A more expressive, richer Common Data Model



Overview of the platform and CDM

Microsoft has been **collaborating with an ecosystem of ISVs** who help organizations digitally transform their business processes by creating industry extensions to increase reach and flexibility of the Common Data Model. These extensions represent a portion of the industry based on the expertise of the ecosystem and are expected to grow over time.

The following are some examples.

Industry extensions for strategic verticals

In collaboration with partners specializing in certain verticals, the Common Data Model is being extended with industry entity packs for areas such as Healthcare, Retail, Financial Analytics, Education, and others. These entity packs are being released as part of a larger industry solution offering spanning the Business Application platform.

One such partner is **CUNA Mutual Group**, whose AdvantEdge Analytics solution helps credit unions better serve their members. Their extensions for the Common Data Model and standard data connectors help integrate data from line of business apps used by credit unions.

Key scenarios from popular Dynamics offerings

Additional CDM entity definitions covering key scenarios from popular Dynamics offerings are being added, including scenarios from Finance, Operations, Marketing, and more. Along with updated Dynamics applications, customers will be able to leverage these standard entities in their own scenarios.

Adobe XDM

Adobe is collaborating with Microsoft on CDM in multiple areas, including the unified representation of profile enrichments and a unified customer profile, to facilitate smooth **interoperability** spanning services and user experiences, leveraging underneath Microsoft's CDM and Adobe's XDM.

Common Data Model community content

A Common Data Model and Data Integration content complements the CDM GitHub repository to provide guidance, deep-drive articles, and best practices.

Common Data Model entity explorer

This interactive and graphical entity explorer allows customers and partners to better understand and leverage existing Common Data Model entities for business applications and analytical solution development. Detailed entity and attribute metadata descriptions provide insight into the rich semantics of the model.

Improved documentation and presentation content

Improved documentation and presentation content for customers and partners to better understanding what's included in the Common Data Model, how best to use it within the platform, and how to customize it in a way that follows the CDM best practices.

Discussion forums are also being set up to support a community for application, data model, and data integration template developers.

In addition, partners will be able to find clear guidance on **how to become a strategic partner** for potential CDM enhancements for industry verticals, to bring more applications to the CDS platforms and further enhance the ecosystem of ISVs and app developers.

- Descriptions of how these solutions and specific use cases enable joint customers and partners to be more successful in using and building solutions (on top of CDM and CDS platforms) much more easily, and how this creates a thriving ecosystem of additional apps and integrations.
- How to learn more about packaged turn-key solutions in AppSource that leverage these CDM enhancements, and how to acquire them.
- Joint announcements of these strategic partners, and testimonials of our joint customers.

Consultants interested in **building data integration templates and solutions** to connect systems of record and SaaS services to CDS are supported with standard connectors, the Data Connector SDK, and guidance and best practices on how to transform data to Common Data Model entities.

Built-in automatic support for the Common Data Model

Power Query data integration experiences, data integration templates, CDS for Apps, and Power BI dataflows implement the Common Data Model. A critical part of the Common Data Model and the suite of products and experiences it supports is its extensibility.

Data Integration Templates accelerate integrating data into well-known Common Data Model entity shapes from common line-of-business applications and SaaS services. For example, the Salesforce template helps customers integrate their data into CDS and Power BI dataflows and thereby gain insights into their opportunities and sales pipeline. Additional features for templates will expand this capability to end customers as well.

Richer and more unified connector and developer ecosystem

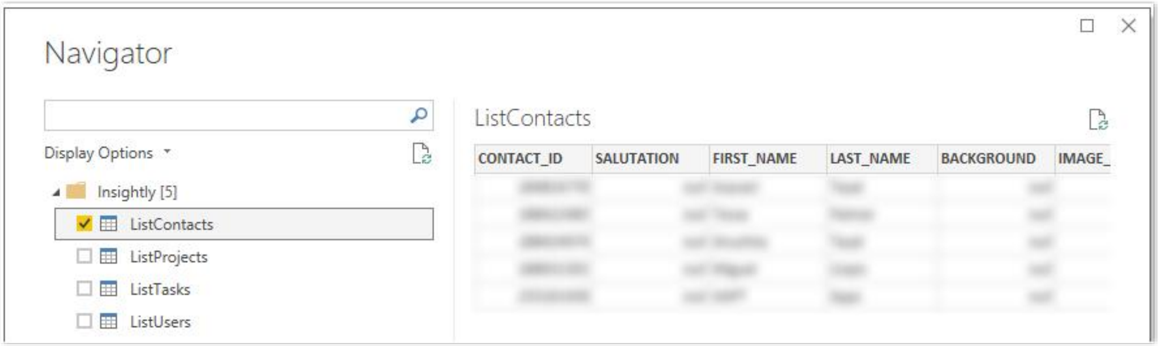
A critical part of Data Integration and the suite of products it supports is connectivity to external data sources. While we continue to invest in a set of enterprise grade data sources, there are a growing number of databases and services many users come to depend on outside of that set. To ensure our users can connect to the data they need, we continue to invest in our extensibility points throughout the platform.

Improved development for connectors across the platform

Developers and ISVs looking to build connectors for our platform can choose to build connectors with actions and triggers for PowerApps, Microsoft Flow, and Logic Apps, or build rich data connectors for Power BI. Developers and ISVs can additionally build connectors for the Common Data Service for Applications and Power BI dataflows through Data Integration. ISVs interested in supporting our full platform can do so now.

This release includes a number of improvements for ISVs and developers to build, test, and release their connectors across our entire platform. With the general availability of the Power Query SDK, developers now have access to a mature platform for building rich connectors for Power BI, Common Data Service for Applications, and Power BI dataflows. With a rich set of documentation and samples to guide developers, new features in the SDK allow for signing, versioning, and validation of custom connectors. Access the Power Query SDK here.

One of the features in preview is a single connector that works across the full platform, and can be developed from scratch or created from an existing OpenAPI definition. Developers interested in building such a connector can get started with the custom connector portal in Microsoft PowerApps, Microsoft Flow or Logic Apps, or with the Power Query Data Connector SDK that is now available. It allows developers to generate the correct artifacts for the full platform. In addition to the current inline testing experiences in Microsoft Flow and PowerApps, the connector can be downloaded to use with the Power BI Desktop or On-premises Data gateway for a full end-to-end testing in those products.



Improved consumption for connectors

With this release, we now provide an integrated experience to offer improved consumption experiences for connectors in Power BI Desktop and via the On-premises Data gateway. Certified connectors built by partners and ISVs can now be easily discovered and used in Power BI Desktop. This integration will add connectors to the large number of integrations and improve experiences for our developers and consumers in the ecosystem. Both the personal and enterprise versions of the On-premises Data gateway now support discovery and data refreshes for certified and custom connectors.

- Support for certified connectors in Power BI Desktop
- Support for custom connectors in the personal and enterprise gateway

Unified connector certification program

Developers and ISVs building connectors may submit their connectors for certification to Microsoft. Certified connectors are released publicly and provide an integrated experience for end users. It increases the reach, discoverability, and usage of the service.

The connector certification program is open to submissions for any partner-built connectors that meet the basic requirements:

- The submitter is affiliated with the service the connector is built against.
- The connector supports business user scenarios for the targeted platform.

Read more about the connector certification program.

Enhanced administrator capabilities for Data Integration

Top asks from our customers in the October '18 release.

General Data Protection Regulation (GDPR) and Accessibility General

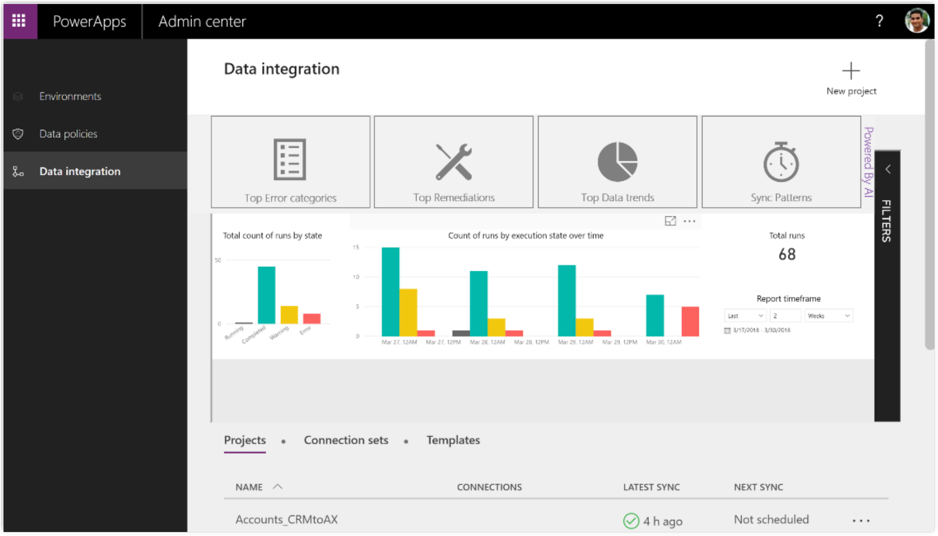
GDPR requirements are among the top company priorities this season. The data integrator for admins meets GDPR requirements that enable access and delete and other GDPR-granted data subject rights. Additionally, the data integrator for admins is also compliant with Grade-C accessibility requirements.

Improving ability to customize and version templates

We understand every business is different. Since the release of the data integrator for admins, the majority of our customers have leveraged the ability to customize templates for process-based integration, making it a highly used feature. In the past, customers had to always start from an existing template and tweak it to create a new template. We have further enhanced this experience by providing a way to create new templates from scratch and provide an ability to version templates and validate source and destination solutions.

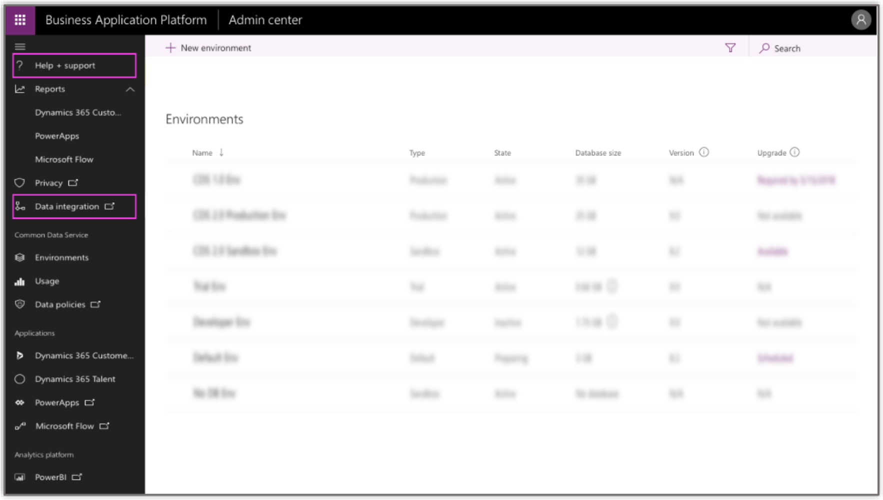
A richer data integrator admin dashboard powered by AI

Earlier this year, Microsoft released an admin dashboard that provides a one-stop, real-time view of all project executions and their status with a drill-down to view details of executions. The enhanced dashboard now provides richer statistics, such as categorization of errors, remediation for frequent errors, intelligently suggesting data refresh intervals, data trend analysis and sync patterns. All this out of the box, without writing code.



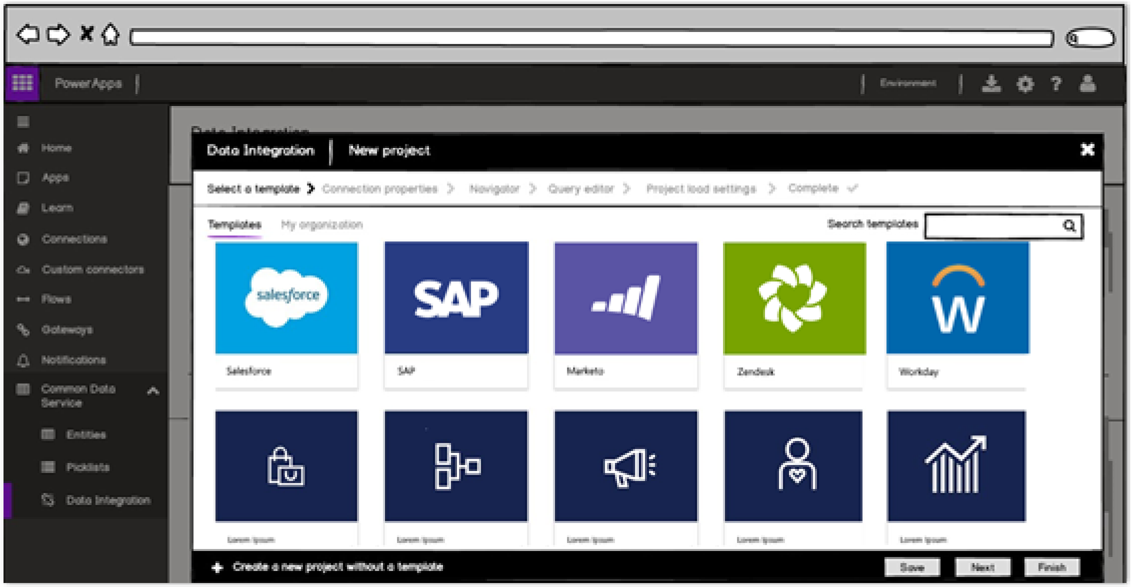
Improved data integration setup and administration experience with performance improvements

By centralizing all experiences in the new Business Platform Admin Center, the data integrator for admins provides an improved setup experience wherein customers no longer need to switch between multiple portals. This includes a new ability to create data integration support tickets, in-place from the same portal. The project execution history will provide the full history over past executions. The data import performance will be improved with new automatic mechanisms for batching and data parallelism underneath.



Ability to share data integration templates within and across tenants

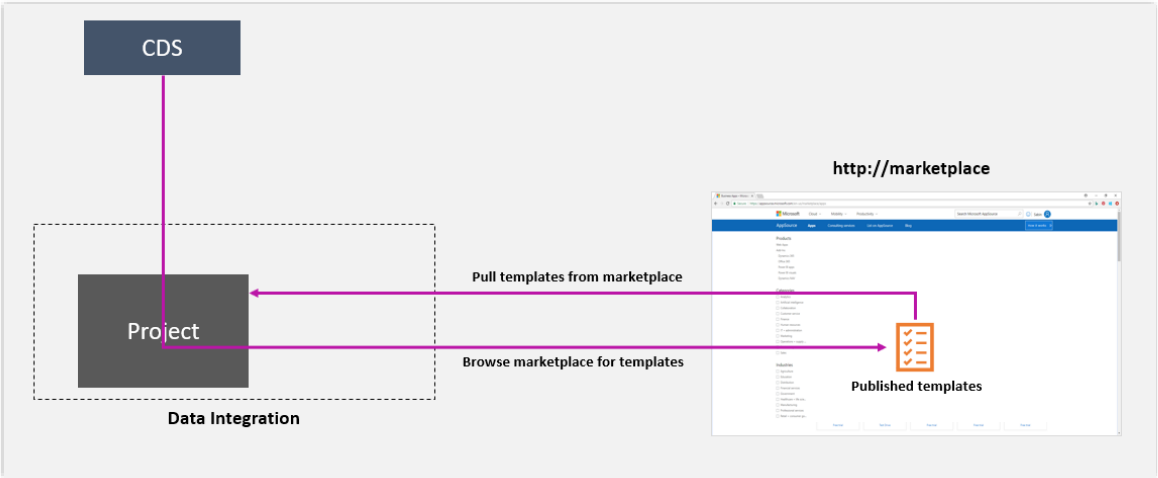
Data Integration Templates accelerate getting data to the Common Data Service from common third-party systems of records and SaaS services. For example, the **Salesforce template** helps customers integrate their Salesforce data into CDS and gain insights into their opportunities and sales pipeline easily. In addition to Microsoft providing additional data integration templates out of the box, customers and ISVs can leverage the underlying platform to simply build their own new templates and share them across CDS instances, as well as customize existing templates to adapt them to their needs and repackage them as new templates for reuse.



Consultants can customize templates, as well as repackage and reuse them across CDS instances without having to repeat the process. Collaboration and distribution in larger enterprise organizations are supported through sharing templates with specific set users or groups.

With the help of Common Data Service for Apps role-based access, business users and admins will be able to assign fine-grained permissions that allow users within their organization to either read, contribute to, or own templates. This capability is also extended to data integration projects, as large enterprise organizations often need to structure who can contribute to projects and who can read/use. Multiple users can share projects and templates with permissions defined for their role.

Templates will also become easily discoverable in a central marketplace. Customers will be able to create a data integration project by easily browsing the marketplace and obtain the latest templates. Additionally, customers and partners will be able to create custom templates and publish them to the marketplace. Templates could also be shared across tenants with the ability to control viewership.



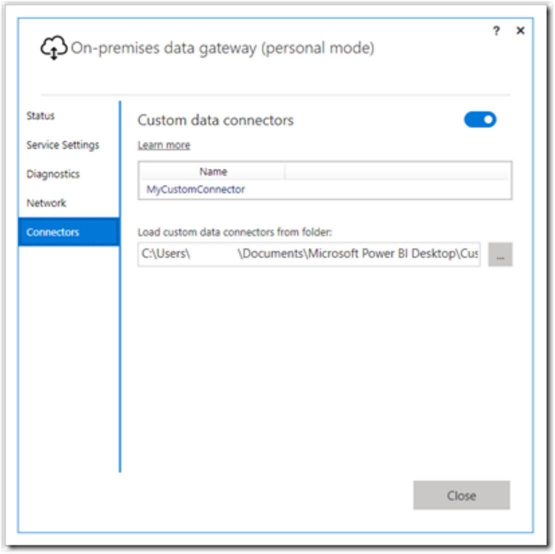
Enterprise-grade hybrid connectivity using the on-premises data gateway

This release includes multiple updates around improving the on-premises data gateway.

Certified custom connectors in Power BI Desktop

Earlier this year, we announced support for custom connectors in Power BI Desktop, leveraging the powerful capabilities of the M language allowing partners to write their own connectors and distribute them to every Power BI user.

Custom connectors support in the gateway allows users to have their reports that they built with custom connectors stay up to date on the Power BI service by refreshing the data through the on-premises data gateway.

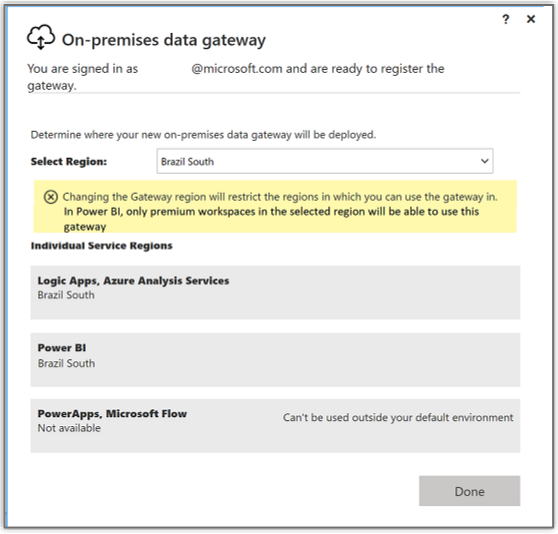


Custom connectors support in the on-premises data gateway

Gateway multi-geo support for Power BI Premium

As part of the work to support multi-geo in the Power BI service, the on-premises data gateway will allow users during the configuration step to choose a different region from their tenant's home region. This will ensure that the data source's information and credentials remain in the chosen region to comply with the organization's unique regulatory requirements.

Experiences need to be updated so that users can leverage the on-premises data gateway in those regions. Part of that effort includes ensuring the data source information (credentials, for example) does not leave the region the workspace is in (to comply with data sovereignty).



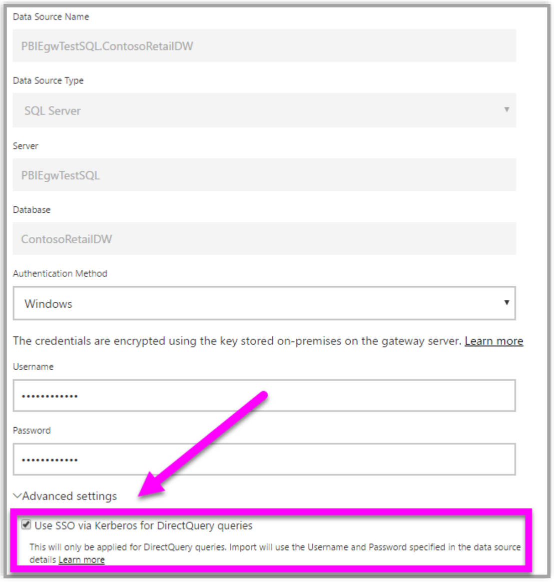
Multi-geo support in the on-premises data gateway

Guarantee high availability of gateways via clustering

The high availability capabilities in the on-premises data gateway that we released in November 2017 are transitioning from public preview to general availability. Part of this effort includes multiple experience improvements, especially around better error reporting and improved user experience.

Improved Kerberos single sign-on support

We plan to support multiple domains in our SSO implementation as well as make it easier to test the SSO connection and diagnose issues.



Improved Kerberos single sign-on support

SAML-based single sign-on for supported data sources

Last year we added Kerberos single sign-on support to the gateway for multiple sources, including SQL Server, SAP HANA, and Teradata.

This period we plan to continue investments in single sign-on support by adding support to SAML-based single sign-on scenarios for supported data sources.

Additional cloud data refresh capabilities for parity with Power BI Desktop

There are some cases where a Power BI dataset can refresh without issues in Power BI Desktop but fails to refresh in the Power BI service. This commonly happens because of the privacy settings of the individual data sources used in this dataset.

In Power BI Desktop, users can change the privacy settings for each data source, allowing the dataset to refresh successfully. We intend to give users the ability to successfully refresh those datasets in the Power BI service.

Improved data source settings experience

We plan to improve the data sources creation experience on the "Manage Gateways" page in the Power BI service by adding some of the highly requested capabilities, such as the ability to skip the test connection step, to rename data sources, and to create multiple data sources with different credentials.

Tenant level administration of on-premises data gateway

We intend to add the ability for tenant administrators to manage all the on-premises data gateways in their tenant through both an API and the user interface.

Basic traffic load balancing in the on-premises data gateway

We plan to introduce the ability to split the requests traffic for a given gateway cluster across all gateways in that cluster. The gateway administrator will be able to turn this capability on and off according to their organization's needs.

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