Drupal ATS Technical Specifications

Overview

The **Drupal ATS** project is an open-source Applicant Tracking System built on Drupal. The project page can be found at https://www.drupal.org/project/ats.

An applicant tracking system (ATS) is a software platform that automates administrative tasks in recruitment, interviewing, and hiring. The Drupal ATS will offer both a Standard, and Professional version. The Standard version is geared toward the hiring needs of any organization, while the Professional version adds features specific to staffing and recruitment firms.

General Approach

The Drupal ATS is generally a straightforward system built for the purpose of managing the content of Candidates moving through the hiring process. As this calls for what can be referred to as "State Management" the Drupal User entity will be the main entity that other node entities reference via entity references a Drupal core functionality. The User contains the main contact information, and is associated with other entities such as Candidate, Organization, Interview, Placement, or other entities needed along the user journey.

A figma file depicts the workflows contained within the product:
https://www.figma.com/file/Jg4KotYdPyhfJ1NF7wCIYk/Drupal-ATS-Recruitment-Workflow?node-id=16%3A137&t=7h2t2lBpitmdwGTc-0

Entities

Drupal content is built using **Entities** – flexible, configurable data objects created using the Entity API. Drupal Entities are collections of **Fields**, which are created using the Field API. Entities may contain any number of arbitrary Fields of any type.

Drupal ATS Entities

1. User
2. Nodes
3. Taxonomy
4. Files
5. Comments
6. Candidate

Drupal ATS Content types

1. Organization
2. Application
3. Job
4. Interview
5. Screening
6. Placement
7. Task
8. Note
9. Resume
10. Reference
11. Company*
12. Contact*
13. Opportunity*
14. Lead*
15. Review*
16. Submission / Client Submission*

* Specific to the Professional version

Drupal Content types contain a collection of Fields each with unique "machine names." The Drupal ATS will use data modeling from Schema.org, leveraging universal machine names for ease of machine-to-machine integration with future systems.

User

The Drupal user will feature base contact fields.

Machine Name	Label	Data Type	Form Widget	Required
`created`	Created	timestamp	N/A	N/A
`changed`	Changed	timestamp	N/A	N/A
`uid`	User ID	N/A	N/A	N/A

Candidate

The Candidate record is a key entity within the ATS and is connected to many of the other system entities. A Candidate record is currently created in 4 different methods. 1. A Candidate can be added manually by a permissioned user by Selecting Add - Candidate from the main menu. 2. A Candidate record is created by the system when a new Job Application is received and no Candidate records exist with a matching email address of the Applicant. 3. Candidate records are created via the Referral program, again after confirming the referral doesn't already exist. 4. A Candidate record can be created system to system by the Candidate API.

Candidate will contain a collection of base fields taken from the Schema.org Person data model https://schema.org/Person

Machine Name	Label	Data Type	Form Widget	Required
`ats_can_status`	Status	Taxonomy term reference	Options_select; (Invited, Accepted, New Lead, Active, Placed, DNU, Archive)	TRUE
`ats_can_ownership`	Ownership	Entity reference	Entity_reference_ autocomplete (from User table, all Recruiter or Manager roles, default current user)	TRUE
`ats_can_source`	Source	Taxonomy term reference	Options_select (Referral, Monster, Career Builder, Dice, Corporate Website, LinkedIn, Facebook,	false

			Twitter, Free job board, Indeed, Event, Staffing Referrals, Other)	
CONTACT (field group)		Field group		
ats_can_first_name	First Name	String (255)	string_textfield	TRUE
ats_can_middle_name	Middle Name	String (255)	string_textfield	FALSE
ats_can_last_name	Last Name	String (255)	string_textfield	TRUE
ats_can_nick_name	Nickname	String (255)	string_textfield	FALSE
ats_can_pronoun	Personal Pronoun	Taxonomy term reference	Options_select (Default Blank, He / Him, She / Her, They / Them)	FALSE
ats_can_name_record	*Name Pronunciation feature (record & play)*	*TBD*	*TBD*	*FALSE*
ats_can_email1	Email Address 1	Email formatted	string_textfield	true
ats_can_email2	Email Address 2	Email formatted	string_textfield	false
ats_can_mobile_phone	Mobile Phone	Phone formatted	string_textfield	TRUE
ats_can_work_phone	Work Phone	Phone formatted	string_textfield	false
ats_can_other_phone	Other Phone	Phone formatted	string_textfield	false
Address (field group)	Address	Sub Field group		
ats_can_address	City	Address module	address	false
ats_can_address	State or Province	Address module	address	false
ats_can_address	Street address	Address module	address	false

`ats_can_address`	Postal Code	Address Module	address	false
`ats_can_address`	Country	country	country_default	false
		End Sub Field group		
		End Field group		
PREFERENCES (field group)		Field group		
`ats_can_employ_pref`	Employment Preference	Check boxes	Check boxes/ select one or more; (Direct Hire, Contract, Contract to Hire)	false
`ats_can_pref_mode`	Preferred Work mode	Taxonomy term reference	Options_select (100% Remote, Hybrid, 100% in the Office)	false
`ats_can_referrals`	Referrals	Entity reference	Entity_reference_ autocomplete	false
`ats_can_date_available`	Date Available	Datetime	datetime_default	false
`ats_can_availability`	Availability	Taxonomy term reference	Options_select; (10 hours, 20 hours, 30 hours, 40 hours, As needed/open to offers)	false
`ats_can_distance_trav`	Distance Willing to Travel (miles)	Taxonomy term reference	Options_select (Within 10 Miles Within 20 Miles Within 30 Miles Within 50 Miles Within 100 Miles)	false
`ats_can_relocate`	Willing to Relocate?	radio	Radio buttons Yes	No		Unconfirmed (default)	false
`ats_can_blogger`	Open to Blogging?	radio	Radio buttons Yes	No		False

			Unconfirmed (default)	
COMPENSATION (field group)		Field group		
`ats_can_employee_type`	Employee Type	Taxonomy term reference	Options_select (1099, W2, Corp-to-Corp)	false
`field_ats_can_salary_current`	Current Salary	Currency (default to US Dollar)	Integer	false
`field_ats_can_salary_preferred`	Preferred Salary	Currency	Integer	false
`field_ats_can_rate_current`	Current pay rate	Currency	Integer	false
`field_ats_can_rate_desired`	Desired pay rate	Currency	Integer	false
`field_ats_can_rate_low`	Lowest acceptable pay rate	Currency	Integer	false
		End Field group		
QUALIFICATIONS (field group)		Field group		
`ats_can_title`	Primary Job Title	Taxonomy term reference	select_autocomplete (job_titles)	TRUE
`ats_can_additional_titles`	Additional Job Titles	Taxonomy term reference	Multi-select_autocomplete (job_titles; limit to 3)	false
`ats_can_current_comp`	Current Company	String (255)	string_textfield	false
`ats_can_current_comp`	Current Company (Professional Version)	Entity reference (contacts)	entity_reference_autocomplete	false
`ats_can_resume_link`	Resume Link	String (255)	string_textfield	FALSE

`ats_can_resume_files`	Resume File(s)	Entity reference (resumes)	entity_reference_ autocomplete	FALSE
`ats_can_category`	Category	Taxonomy term reference	Options_select; (see supplemental info)	false
`ats_can_skills`	Skills	Taxonomy term reference	Multi-select_auto complete	FALSE
`ats_can_skill_years`	Years at Skill	String (10)	integer	FALSE
		End Field group		
`ats_can_skills_soft`	Soft Skills	Taxonomy term reference	Multi options_select (see supplemental info)	FALSE
`ats_can_linkedin`	LinkedIn Profile	String (255)	string_textfield	false
`ats_can_associations`	Professional Associations	String (255)	string_textfield	false
`ats_can_cms_experience_ lvl1`	Drupal Experience Level	Taxonomy term reference	Options_select; (Entry Level Intermediate Expert/Advanced)	FALSE
`ats_can_cms_experience_ lvl2`	WP Experience Level	Taxonomy term reference	Options_select; (Entry Level Intermediate Expert/Advanced)	FALSE
`ats_can_industry`	Industry	Taxonomy term reference	Options_select	FALSE
`ats_can_project_links`	Project Links	String (255)	String_textfield (start with one; add more button)	false

`ats_can_certifications (paragraph)`	Certifications	Entity reference revisions	Paragraphs	false
`field_ats_can_cert_type`	Certification Type	Taxonomy term reference	entity_reference_ autocomplete	FALSE
`field_ats_can_cert_url`	Certification URL	Link	Link	FALSE
`field_ats_can_cert_file`	Certification Files	File (Files)	File	FALSE
		End Field group		
OTHER (field group)		Field group		
`ats_can_citizenship`	Citizenship	Taxonomy term reference	Options_select; (Default to Blank, List values = Blank, Citizen, Not a citizen, Green Card Holder, Other)	false
`ats_can_citizenship_det ail`	Citizenship Details	String (255)	string_textfield	false
	English Proficiency	Rating / Scale		false
`ats_can_other_lang`	Other Languages Spoken		Select options; (see supplemental info)	false
	Other Languages Spoken Proficiency	Rating / Scale		false
	General Candidate Comments	String (500)	textfield	false
		End Field group		
EDUCATION (field group)	Education	Entity	Paragraphs	

		reference revisions		
`field_atc_can_edu_school`	School	String (255)	string_textfield	FALSE
`field_ats_can_edu_school_city`	City	String (255)	string_textfield	FALSE
`field_ats_can_edu_school_state`	State		Select_option; state list	FALSE
`field_ats_can_edu_degree`	Degree	String (255)	string_textfield	FALSE
`field_ats_can_edu_major`	Major	String (255)	string_textfield	FALSE
`field_ats_can_edu_field_of_study`	Field of study	String (255)	string_textfield	FALSE
`field_ats_can_edu_start_date`	Start date	Datetime	datetime_default	FALSE
`field_ats_can_edu_end_date`	End Date	Datetime	datetime_default	FALSE
`field_ats_can_edu_grad_date`	Graduation Date	Datetime	datetime_default	FALSE
`field_ats_can_edu_gpa`	GPA	String (10)	integer	FALSE
`field_ats_can_edu_activities`	Activities and Awards	String (255)	string_textfield	FALSE
`field_ats_can_edu_description`	Description	Text field / WYSIWIG	string_textarea	TRUE
		End Field group		
EXPERIENCE (field group)	Experience	Entity reference revisions	Paragraphs	
`field_ats_can_exper_start_date`	Experience Start Date	Datetime	datetime_default	TRUE
`field_ats_can_exper_end_date`	Experience End Date	Datetime	datetime_default	FALSE
`field_ats_can_exper_comp_name`	Company Name	String (255)	string_textfield	TRUE

`field_ats_can_exper_client_contact`	Client Contact	Entity reference	entity_reference_autocomplete	FALSE
`field_ats_can_exper_job_title`	Job Title	Taxonomy term reference	select_autocomplete (job_titles)	TRUE
`field_ats_can_exper_description`	Experience Description	Text field / WYSIWIG	string_textarea	FALSE
`field_ats_can_exper_location`	Experience Location	String (255)	string_textfield	FALSE
`field_ats_can_exper_loc_type`	Experience Location Type	Radio select	(On site, Hybrid, Remote)	FALSE
`field_ats_can_exper_employ_type`	Experience Employment Type	Radio select	(full-time, part-time, self-employed, freelance, internship, trainee)	FALSE
		End Field group		
`ats_can_file`	Files	File (Files)	File	FALSE
`ats_can_tasks`	Tasks	Entity reference (Tasks)	entity_reference_autocomplete	FALSE
`ats_can_notes`	Notes	Entity reference (Notes)	entity_reference_autocomplete	FALSE
`ats_can_resume_description`	Resume	Text field / WYSIWIG	string_textarea	False
`ats_can_work_with_me`	Work with me	Text field / WYSIWIG	string_textarea	False
	Marketing Automation Engagement Score			
	User Add Date			
`field_ats_can_user`	User ID			

`created`	Created	timestamp	N/A	N/A
`changed`	Changed	timestamp	N/A	N/A

References

A Candidate can have one or more References. Bullhorn presents the References as separate entities and we have kept that model here.

Access to the References form is through the Candidate screen. "Add Reference" CTA should open the form, the candidates id should be associated through this relationship.

Machine Name	Label	Data Type	Form Widget	Required
`ats_can_refer_contact`	Client Contact	Entity reference (Contacts)	entity_reference_autocomplete	FALSE
`ats_can_refer_first_name`	Reference First Name	String (255)	string_textfield	FALSE
`ats_can_refer_last_name`	Reference Last Name	String (255)	string_textfield	FALSE
`ats_can_refer_job_title`	Reference Job Title	String (255)	string_textfield	FALSE
`ats_can_refer_phone`	Reference Phone	String (12)	phone	FALSE
`ats_can_refer_email`	Reference Email	String (500)	email	FALSE
`ats_can_refer_company`	Company	String (255)	string_textfield	FALSE
`ats_can_refer_years_known`	Years Known	String (50)	string_textfield	FALSE
`ats_can_refer_start_date`	Employment Start Date	Datetime	datetime_default	FALSE
`ats_can_refer_end_date`	Employment End Date	Datetime	datetime_default	FALSE
`ats_can_refer_notes`	Reference Notes	Entity reference (Notes)	entity_reference_autocomplete	FALSE
`ats_can_refer_cand_title`	Candidate Title	String (255)	string_textfield	FALSE

	Candidate ID		N/A	N/A
created	Created	timestamp	N/A	N/A
changed	Changed	timestamp	N/A	N/A

Screening

The Screening entity will be a custom entity type and we should see if we can contribute this back to schema.org as there is not existing model. It will contain fields taken from our reference model Bullhorn ATS.

The Screener role should have Edit capabilities with the Screening fields only; other system data should be view only. Screeners can be granted additional permissions.

A Prescreening questionnaire typically leads to Client tests, code samples, further information gathering. These steps lead to an interview; questions should build upon each other.

Machine Name	Label	Data Type	Form Widget	Required
`ats_can_screening_title`	Title	String (255)	string_textfield	FALSE
`ats_can_screening_date`	Screening Date	Datetime	datetime_default	TRUE
`ats_can_screening_screener`	Screener	Entity reference	entity_reference_autocomplete	TRUE
`ats_can_screening_candidate`	Candidate	Entity reference	Entity_reference_autocomplete (If adding via the candidate record, default to selected Candidate)	TRUE
`ats_can_screening_related_job`	Job	Entity reference	entity_reference_autocomplete	False
`ats_can_screening_status`	Screening Status	Taxonomy term reference	Options_select; (Default = New; Values = New, Information Gathering, Ready for Screening,	False

			Screened)	
`ats_can_screen ing_related_ty pe`	Screening Type	Taxonomy term reference	Options_select; (Default =; Values =)	False
`ats_can_screen ing_notes`	Screening Notes	Text field / WYSIWIG	string_textarea	FALSE
`ats_can_screen ing_results`	Screening Results	Text field / WYSIWIG	string_textarea	False
`created`	Created	timestamp	N/A	N/A
`changed`	Changed	timestamp	N/A	N/A

Appointments

Appointments are used to schedule, or capture after the fact, meetings held by the internal team members. We expect this CT to feed at least a few reports.

Appointments should have the ability to be Scheduled on a recurring timeframe. Reminders should be available to be sent to the Appointments Participants.

Machine Name	Label	Data Type	Form Widget	Required
	Notify Attendees	Yes / No		
	Appointment Subject	string	Text field	TRUE
	Appointment Date and Time	Datetime	datetime_default	TRUE
Alternate Appointment Times (field group)		Field group		
	Alternate 1 Appointment Date and Time	Datetime	datetime_default	FALSE
	Alternate 2 Appointment Date and Time	Datetime	datetime_default	FALSE

	Alternate 3 Appointment Date and Time	Datetime	datetime_default	FALSE
		End Field Group		
	Appointment Participants	email field	Entity_reference_ autocomplete (contact) or allow new email	FALSE
	Appointment Owner	Entity reference	Entity_reference_ autocomplete (Owner)	FALSE
	Candidate	Entity reference	entity_reference_a utocomplete	FALSE
	Job	Entity reference	entity_reference_a utocomplete	FALSE
	Appointment Type	Taxonomy term reference	Options_select (Sales meeting; Interview; 2nd Interview; 3rd Interview; Final Interview; Quality Control; Post-placement check-in)	False
	Appointment Status	Taxonomy term reference	Options_select; (To be Scheduled, Scheduling in progress, Scheduled, Held, Canceled, To be Rescheduled)	FALSE
	Appointment Format	Taxonomy term reference	Options_select; (Online, Phone, In Person)	FALSE
	If 'Online' option selected Provide field to Add Video Meeting Link	String (255)	string_textfield	FALSE

	Appointment Notes	Entity reference	Entity_reference_ autocomplete (notes)	FALSE
	Appointment Files	Entity reference	Entity_reference_ autocomplete (files)	False
	Appointment Description	Text field / WYSIWIG	string_textarea	False
	Recurrence	Taxonomy term reference	Options_select; (Does not repeat, Daily, Weekly, Monthly, Annually)	FALSE
	Post Placement Recurrence		Yes / no	FALSE
	(If yes) - this setting is tied to the Placement Start Date. If First Day is selected, that date should come from the Placement Start Date, similarly for the rest of the dates.	Check boxes, able to select more than one	Options available: first day, end of week one, end of month one, and then monthly	
	Distribution List			
	Created	timestamp	N/A	N/A
	Changed	timestamp	N/A	N/A

Organization

Organization will be based on a selection of fields taken from the schema.org Organization data model https://schema.org/Organization

Machine Name	Label	Data Type	Form Widget	Required
field_ats_org_name	Organization Name	String (255)	string_textfield	TRUE
field_ats_ogr_address	Address	country	country_default	TRUE

`field_ats_ogr_email`	Email	Email (unique)	string_textfield	TRUE
`field_ats_ogr_website`	Website	String (255)	string_textfield	FALSE
`field_ats_ogr_status`	Status	Taxonomy term reference	options_select	FALSE
`created`	Created	timestamp	N/A	N/A
`changed`	Changed	timestamp	N/A	N/A

Job

Job is a collection of fields that will choose from the Schema.org collection to accommodate general needs https://schema.org/JobPosting

A job is created in 1 of 3 ways, 1) manually added with the drupal ATS form, 2) imported from a previous system through a data migration 3) In the Professional version, from an Opportunity that gets converted to a Job Posting.

Add Scheduling abilities to the Job Publishing settings. Currently it allows publish / unpublish.

Add the ability to schedule when the job is published and when it closes and is unpublished.

Add a notification of when the job is approaching its close date; and allow the notified user (job owner) to extend the close date.

Other notifications for Job:

1. when start date is approaching…

Future iterations of Job are envisioned to contain a robust set of interview standards, job fulfillment steps, communications rules and other features.

Machine Name	Label	Data Type	Form Widget	Required
`field_ats_job_title`	Job Title			FALSE
`field_ats_job_type`	Job Type	radio buttons	Options_select (Contract, Contract to Hire, Direct Hire, Internship)	TRUE

Conditional field if Job Type is **Contract**, display:				
`field_ats_job_start_da te`	Start Date	Date	datetimeitem	TRUE
`field_ats_job_end_date`	Scheduled End Date	Date	datetimeitem	FALSE
- `field_ats_job_pa y_rate_high`	Pay Rate High	Currency (USD)	string(15)	FALSE
- `field_ats_job_pa y_rate_low`	Pay Rate Low	Currency (USD)	string(15)	FALSE
- `field_ats_job_ma rk_up_perc`	*Target Mark up % **(system setting)*	*Integer / calculation* *Default to 0, unless there is a value in the system settings, in which case default to system setting value.* *Value tied to Client Bill Rate which should dynamically change as the Target Mark up % changes and vice versa.* *(this field should use the system setting as the default value but should be able to be manually overwritten.)*	*string(15) %*	*FALSE*

- `field_ats_job_bi` `ll_rate`	*Client Bill Rate*	Currency (USD) *calculation* *populate value = (average of high and low pay rates) + Target Mark up % .* *Can be manually overwritten.* *Target % updates as value in field is updated*	*string(15)*	*FALSE*
-				
`Conditional fields if` `job type is` **`Contract`** **`to Hire, or`** **`Internship,`** `display:`				
`field_ats_job_start_da` `te`	Start Date	Date	datetimeitem	TRUE
`field_ats_job_end_date`	Scheduled End Date	Date	datetimeitem	FALSE
- `field_ats_job_sa` `lary_high`	Salary High	Currency (USD)	string(15)	FALSE
- `field_ats_job_sa` `lary_low`	Salary Low	Currency (USD)	string(15)	FALSE
- `field_ats_job_pe` `rm_fee_perc`	Perm Fee %	integer	string(15) %	FALSE
- `field_ats_job_be` `nefits`	Benefits	Taxonomy term reference	Options_select (see supplemental info)	FALSE
- `field_ats_job_bo` `nus`	Bonus Package	String (255)	string_textfield	FALSE

- `field_ats_job_pa y_rate_high`	Pay Rate High	Currency (USD)	string(15)	FALSE
- `field_ats_job_pa y_rate_low`	Pay Rate Low	Currency (USD)	string(15)	FALSE
- `field_ats_job_ma rk_up_perc`	*Target Mark up %* **(system setting)*	*Integer / calculation*	*string(15)*	*FALSE*
- `field_ats_job_bi ll_rate`	*Client Bill Rate*	Currency (USD) *calculation*	*string(15)*	*FALSE*
Conditional fields if job type is: **Direct Hire** display				
`field_ats_job_start_da te`	Start Date	Date	datetimeitem	TRUE
- `field_ats_job_sa lary_high`	Salary High	Currency (USD)	string(15)	FALSE
- `field_ats_job_sa lary_low`	Salary Low	Currency (USD)	string(15)	FALSE
- `field_ats_job_pe rm_fee_perc`	Perm Fee %	integer	string(15) %	FALSE
- `field_ats_job_be nefits`	Benefits	Taxonomy term reference	Options_select (see supplemental info)	FALSE
- `field_ats_job_bo nus`	Bonus Package	String (255)	string_textfield	FALSE
`field_ats_job_status`	Status	Taxonomy term reference	options_select	TRUE
`field_ats_job_open_clo sed`	Open / Closed	Boolean	options_select	TRUE
`field_ats_job_priority`	Priority	Taxonomy term reference	Options_select (Hot, Warm, Cold)	TRUE

`field_ats_job_num_openings`	# of Openings	integer	string	false
`field_ats_job_organization`	Organization	Entity reference	entity_reference_autocomplete	TRUE
`field_ats_job_hiring_manager`	Hiring Manager	Entity reference	entity_reference_autocomplete	TRUE
`field_ats_job_company`	Company	Entity reference	entity_reference_autocomplete	FALSE
`field_ats_job_contact`	Contact	Entity reference	entity_reference_autocomplete	FALSE
`field_ats_job_owner`	Owner	Entity reference	entity_reference_autocomplete	FALSE
`field_ats_job_assigned`	Assigned to	Entity reference	entity_reference_autocomplete	FALSE
`field_ats_job_category`	Category	Taxonomy term reference	options_select	TRUE
`field_ats_job_skills`	Skills / Experience	Entity reference revisions	Paragraphs	
`field_ats_job_required_skills`	Skills	Taxonomy term reference	options_multi_select	FALSE
	Soft skills	Taxonomy term reference	Check boxes	FALSE
`field_ats_job_experience_min`	Minimum years experience	Integer	Integeritem	FALSE
`field_ats_job_degree_required`	Degree requirements	Taxonomy term reference	options_select	FALSE
`field_ats_job_cert_required`	Certification requirements	Taxonomy term reference	options_select	FALSE
`field_ats_job_description`	Job Description	String	WYSIWYG	FALSE

`field_ats_job_pub_description`	Published Description	String	WYSIWYG	FALSE
`field_ats_job_mode`	Job work mode	Taxonomy term reference	Options_select	TRUE
`field_ats_job_address`	Address	country	country_default	FALSE
`field_ats_job_credential_requirements`	Credential requirements	String (255)	string_textfield	FALSE
`field_ats_job_candidate`	Candidate	Entity reference	entity_reference_autocomplete	FALSE
`field_ats_job_email_notifications`	Email Notifications	Entity reference	entity_reference_autocomplete	FALSE
	Publish	On / Off		
	Scheduled Publish Date (while date is populated, Publish field = off)	Datetime		false
	Close Date	datetime		false
`created`	Created	timestamp	N/A	N/A
`changed`	Changed	timestamp	N/A	N/A

https://www.drupal.org/project/default_content
https://www.drupal.org/project/pate

Email Notifications

Email Notifications can be created and associated with a number of other Content types such as Job
The system user should be able to define when the notification is sent, and who receives the notification.

Email notifications should be able to be sent on a schedule or leveraged with other content types to follow business rules and complete defined processes.

Machine Name	Label	Data Type	Form Widget	Required

	Title			
	Body			
	Send On			
	Send To			
	Rules			
	When job is Published			
	When Job Close Date is approaching			
`created`	Created	timestamp	N/A	N/A
`changed`	Changed	timestamp	N/A	N/A

Application

Once a Job is published online, it becomes available for applicants to apply. The Application form is rather simple, allowing possible candidates to easily submit their name, contact, and resume file.

Once an application form is received by the system, the ATS responds by 1. Checking for existing users based on email and then either 1a. Creates a new Candidate if no matching email is found or 1b. Response to the Applicant about a matching candidate record and proceeding. 2. The Job owners are notified of new applicants to the posted job, based on the Job notification settings.

"Applications for Review" will be a UI component / card, displaying the responses on the users dashboards.

Machine Name	Label	Data Type	Form Widget	Required
`field_ats_app_first_name`	First Name	String (255)	string_textarea	TRUE
`field_ats_app_last_name`	Last Name	String (255)	string_textfield	TRUE
`field_ats_app_email`	Email	String (255)	string_textfield	TRUE

`field_ats_app_resume`	Resume	File (Files)	File (limit to pdf files)	FALSE

Placement

A Placement will be a custom entity type and we should see if we can contribute this back to schema.org as there is no existing model. It will contain fields taken from our reference model of Bullhorn ATS. This can be https://schema.org/InteractAction specifically https://schema.org/JoinAction and/or https://schema.org/CommunicateAction

A Placement can be created from the UI from 3 different paths, which will inform / populate the placement record with information either about 1) the Candidate or 2) Job depending on the route the user takes through the UI.

Creating a Placement should trigger a set of actions:
1. Update Candidate Record (candidate status)
2. Email to internal team*
3. Email to Candidate, optionally include **Statement of Work***
4. Email Client* - Next steps, any contracts per candidate, etc
5. Schedule Post Placement

*Professional version

Job Data brought over to the placement should include job type which will drive the presentation of Pay Rate / Bill Rate fields or Salary field.

Machine Name	Label	Data Type	Form Widget	Required
`field_ats_pla_title`	Placement Title	String (255)	string_textarea	TRUE
`field_ats_pla_status`	Placement Status	term	taxonomy	TRUE
`field_ats_pla_p_rate`	Pay Rate	integer	string(15)	FALSE
`field_ats_pla_b_rate`	Bill Rate	integer	string(15)	FALSE
`field_ats_pla_salary`	Annual Salary	integer	string(15)	FALSE
`field_ats_pla_date_start`	Start date	Datetime	datetime_default	TRUE

Machine Name	Label	Data Type	Form Widget	Required
`field_ats_pla_date_end`	Scheduled End Date	Datetime	datetime_default	FALSE
`field_ats_pla_candidate`	Candidate	Entity reference	entity_reference_autocomplete	TRUE
`field_ats_pla_job`	Job	Entity reference	entity_reference_autocomplete	TRUE
`created`	Created	timestamp	N/A	N/A
`changed`	Changed	timestamp	N/A	N/A

Task

An internal user with the Role of Recruiter, or Hiring Manager may create a Task to be assigned to another user with permissions rendering them able to interact with the task. It will be an entity related to the User.

Machine Name	Label	Data Type	Form Widget	Required
	Task Title	text_default	string_textarea	TRUE
	Task Description	string	wysiwyg	FALSE
	Task Status	Taxonomy term reference	Options_select; (Open, In-progress, On-hold, Complete)	TRUE
	Task Priority	string	Radio button (A, B, C)	FALSE
	Days to Complete	integer	string(10)	FALSE
	Start Date	Datetime	datetime_default	FALSE
	Scheduled End Date	Datetime	datetime_default	FALSE

	Candidate	Entity reference	entity_reference_autocomplete	FALSE
	Job	Entity reference	entity_reference_autocomplete	FALSE
	Owner	Entity reference	Entity_reference_autocomplete (from User table, all Recruiter or Manager roles)	TRUE
	Assigned by	User Id	N/A	N/A
	Created	timestamp	N/A	N/A
	Changed	timestamp	N/A	N/A

Tearsheets

Currently the recruitment team uses 'tearsheets' to identify sets of candidates or other entities within Bullhorn to take action on. In concept, Tearsheets are basically a saved search result. This feature should allow a user to search the system, select all or a subset of the search results and then save it to either their own set of tearsheets, or a public "shared" set of tearsheets.

Screens that contain the CTA for selected items to "Add to Tearsheet" are: Candidate List, Job List, Company List, Client List, or any other list where items are available for selecting.

"Action" Menus will be present on the Tearsheet List and Tearsheet Detail pages, these will allow the users to:
1. Email
2. Add to Tearsheet
3. Add to Distribution List
4. Remove from list

Designs for the Tearsheets screens can be found in the figma file:
https://www.figma.com/file/KojPA9IC6jv8Wpx0r1HqyK/Drupal-ATS-Professional?type=design&node-id=753%3A192&mode=design&t=fkbW4qH5xqeYGmvQ-1

Machine Name	Label	Data Type	Form Widget	Required

Machine Name	Label	Data Type	Form Widget	Required
`field_ats_tearsheet_name`	Tearsheet Name			TRUE
`field_ats_tearsheet_type`	Tearsheet Type	Select List	Options_select; (Candidates, Contacts, Jobs, Opportunities, Leads)	TRUE
`field_ats_tearsheet_list`	List of entities in search results			TRUE
`field_ats_tearsheet_owner`	Owner	Entity reference	Entity_reference_ autocomplete (owner)	FALSE
`field_ats_tearsheet_visibility`	Public / Private (Default Public)	Default to Public	toggle	FALSE

Submissions

Once a job is accepting applications, the Recruiter and HR Manager roles need a method to submit the Candidates for consideration; the form to do this is the Submission form.

Machine Name	Label	Data Type	Form Widget	Required
`field_ats_submission_description`	Submission Description	Text field / WYSIWIG	string_textarea	TRUE
`field_ats_submission_jobs`	Job	Entity reference	Entity_reference_ autocomplete (job)	TRUE
`field_ats_submission_candidates`	Candidate	Entity reference	Entity_reference_ autocomplete (Candidate)	TRUE
`field_ats_submission_status`	Submission Status	Taxonomy term reference	Options_select (Internally Submitted, Sales Rep Rejected, Candidate Interested, Candidate Not Interested, Client	FALSE

			Feedback, Client Rejected, Interview Feedback, Offer Extended, Offer Rejected, Client Submission)	
`field_ats_submission_source`	Submission Source	Taxonomy term reference	Options_select (Candidate Search, Job Match, External Website, Inbound Call, Other, LinkedIn)	FALSE
`field_ats_submission_pay_rate`	Submission Pay Rate	Currency (USD)	string(15)	FALSE
`field_ats_submission_bill_rate`	Submission Bill Rate	Currency (USD)	string(15)	FALSE
`field_ats_submission_salary`	Submission Salary	Currency (USD)	string(15)	FALSE
`field_ats_submission_comments`	Submission Comments	Text field	String_textarea (500)	false
`field_ats_submission_`	Email Notification			
`field_ats_submission_added_by`	Added by	NA	NA (should just capture this data but it doesn't need to be editable.)	

Presentation Layer

The primary concept behind the presentation layer of the ATS is that of 'feature blocks' living within a dashboard.

Candidate Engagement Summary
Interview Scheduling options
Most Placeable Candidate Summary
Candidate(s) to Job "Rates" range and job type comparison

Applications for Review
Opportunities
Jobs
Interviews
Tasks
Tearsheets

Sub-Menus

Candidate
All candidates move through a workflow of stages including Pre-screen, Submission, Interview, Screening, Offer Extended, Placement. These are apparent to the user on the Candidate Edit and View displays. The user should be able to see what stage the candidate is in the hiring pipeline as displayed in the example below.

Job

Dashboards

https://www.figma.com/file/KojPA9IC6jv8Wpx0r1HqyK/Drupal-ATS-Professional?type=design&node-id=0%3A1&mode=design&t=WqqCSpRg4CPHAGtA-1

Recruiter

Recruitment Manager

Sales Manager

Rep (Business Development Representative)

Manager

Global System Settings

Job Posting Target Mark up %
>   Used in Job for default % of pay rate markup

Candidate

Screens

Tearsheets

Add Tearsheet

Add to Tearsheet - CTA

Tearsheet List

The Tearsheet Detail page displays a table of entities which have a variety of columns based on the Tearsheet Type.

>   Contact
>   Company
>   Type
>
>   Deal Value
>
>   Expected Close Date
>   Associated Lead
>   Actual Close Date
>   Reason Closed

Leads
>   Id
>   Name

First Name
Last Name
Title
New Company
Existing Company
Phone
Email
Address
Owner
Status
Lead Source

Jobs

Sorted by Most Recent
Date Added (MM/DD/YYYY)
Priority
Job Title

Candidates

The Candidates listed within the view should be selectable and able to have actions taken on them. For example, if a Candidate is selected and the user selects Add Task from the main menu, the task modal should open pre populated with the Candidate ID.

a. Date Added (MM/DD/YYYY)
b. First & Last Name
c. Primary Job Title
d. Ownership - ats_can_ownership
e. Candidate Status - ats_can_status
f. Screening Status
g. Skills

View should be filterable by:

h. Name,
i. Ownership (select list),
j. Candidate Screening Status (Select list),
k. Candidate Status (Select list)

Each record listed should have View and Edit links

Save List of Candidates (in leu of Tearsheet)

Interviews

Interviews Scheduled
Interviews Completed
Completed Screening
> *Approved*
> *Denied*
> *Future potential*

Placements
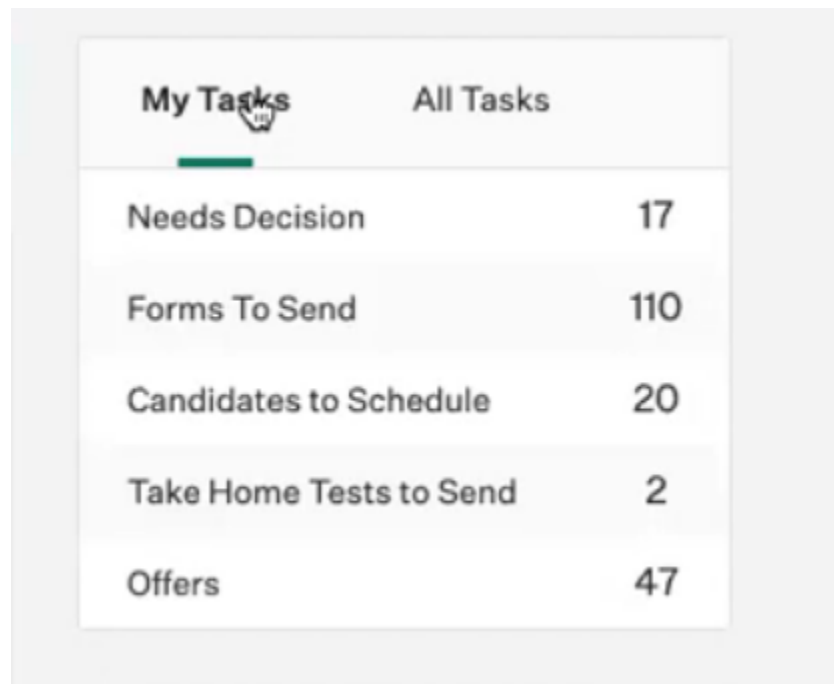
Completed Placements
Failed Placements

Applications for Review

Any submitted applications on respective jobs

Tasks

My tasks
All tasks

I.

Helpful Links?

Forms

1. Interview Score card form
2. Job Application form
3. Technical Evaluation
4. Candidate Feedback on hiring process

Roles

Drupal features a robust user Roles and Permissions system. The primary Roles for the ATS will begin as:

1. Admin (default)
2. Recruiter
3. Recruiting Manager
4. Hiring Manager
5. Interviewer / Screener
6. Candidate

Admin

This role is provided by default in the Drupal system. User 1 is known as the "super user." Additional users that follow can be granted Administrative privileges but do not carry those of the [Super User](#).

Manager Role (need to iterate on what is this as an overarching role with permissions for a level above Recruiting Manger

Recruiter

The Recruiter Role has the ability to Add / View / Edit Candidates that they submit to the system.

Recruiting Manager

The Recruiting Manager role has the ability to Add / View / Edit Candidates that they or other Recruiters have added to the system. They can also view all reports available to them.

Permissions

Insert permissions matrix here as soon as it is determined

Future Iterations

Resume Parsing

Parsing the resume data into the Candidate fields is a feature that is important to develop in future iterations.

Social Login

Providing SSO access via popular Identity Managers (LDAMP, SAML, Oauth)

Social Post

https://www.drupal.org/project/social_post
Post new jobs to linkedin or twitter
https://www.drupal.org/project/social_post_twitter/
https://www.drupal.org/project/social_post_linkedin/

Workforce Management: Quality Control Add-on

A module will be created with various sub-modules that will be created over time. The initial focus will be on Quality Control for contingent workers. Main features will include

- Performance reviews
- Meeting Scheduling
- Meeting recording options
- Notes

Workforce Management: Payments Add-on

The ability to pay contract workers in as many locations as possible around the globe. The team has had discussions with Deel, as well as having internal experience on the roll out of this feature. The Deel API is still maturing, but it is possible to embed, and "white label" the

application. This may prove appealing to some staffing firm users. It will be further explored in later phases of the project.
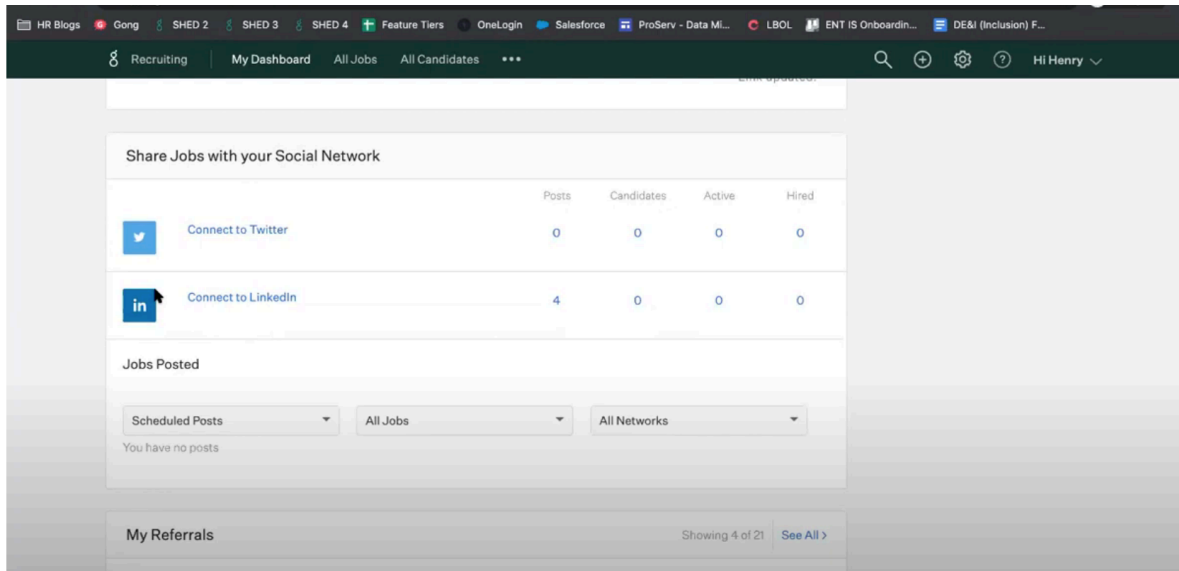
Candidate Screening data

It's envisioned that the Screening functionality of the system will eventually be quite robust, allowing system users to add multiple 'screening' items, as well as have abilities such as publishing screening questions to a public view and capture candidate answers and the creation of feedback form to allow various people to rate the candidate.

User Story: A Screening is created with the type of Code Review. The screener has been given credentials to create a new Screening where they can gather links, allow candidate file uploads, send a questionnaire to a candidate, and view Candidate responses. Similarly to the Job and application relationship, the Candidate should be able to have one or more Screenings.

Machine Name	Label	Data Type	Form Widget	Required
	Screening Files	File	File	False
	Screening Type	Taxonomy term reference	Options_select (need to define screening types)	False
	Screening Questions	Text field / WYSIWIG	string_textarea	False
	Screening Scorecard	Rating scale		false

Job Templates

(Main nav goes away taking the user into a multi page form)(Includes Candidate Scorecard for job)

From the "+" plus menu on the main navigation bar I can choose to "Create a Job."

Step 1 (Screen 1): Choose a starting point
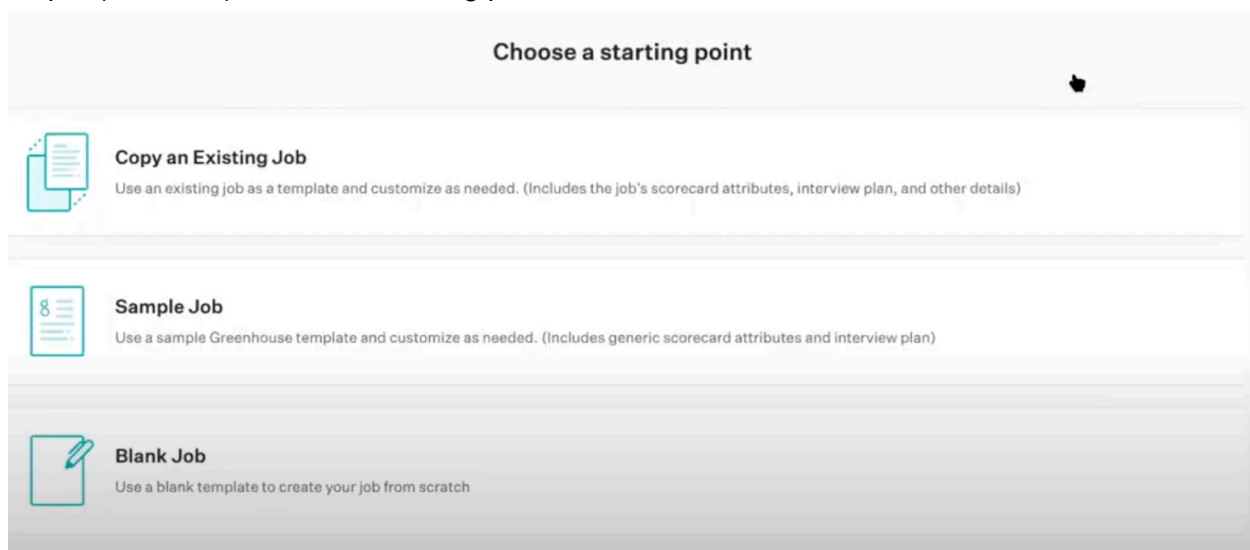
A. Copy an existing job - Use an existing job as a template. (this https://www.drupal.org/project/quick_node_clone should facilitate this on the backend)
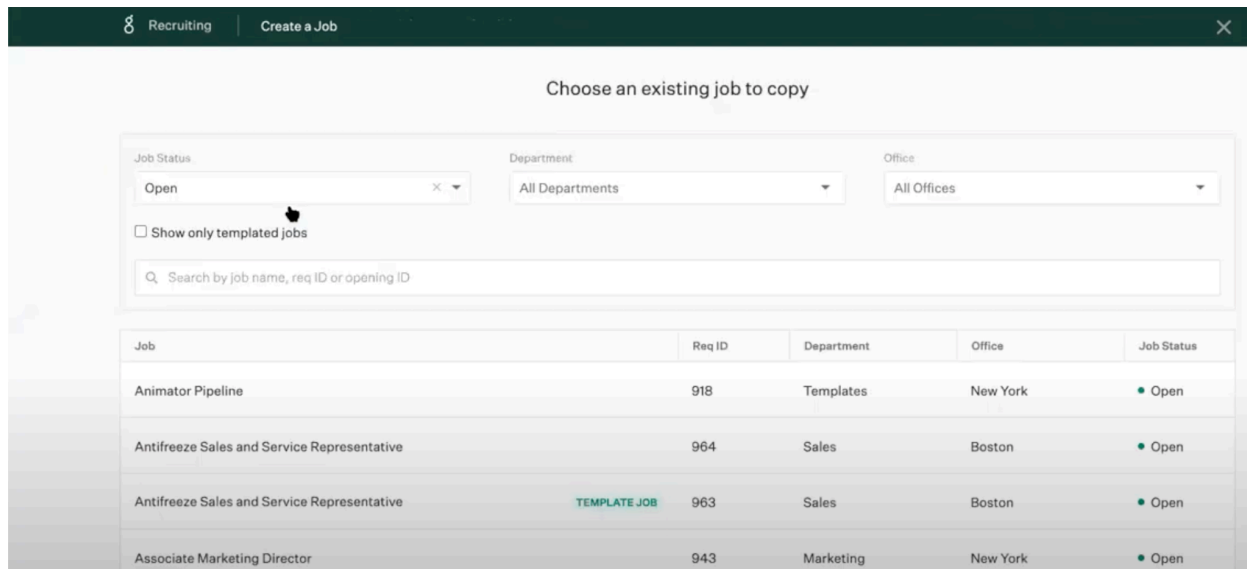
B. Sample job - Choose a sample job and customize it as needed.
   a. Provide a list of available Sample Jobs to choose from to create a clone and save your new job
C. Blank job - Use a blank template to create your job.
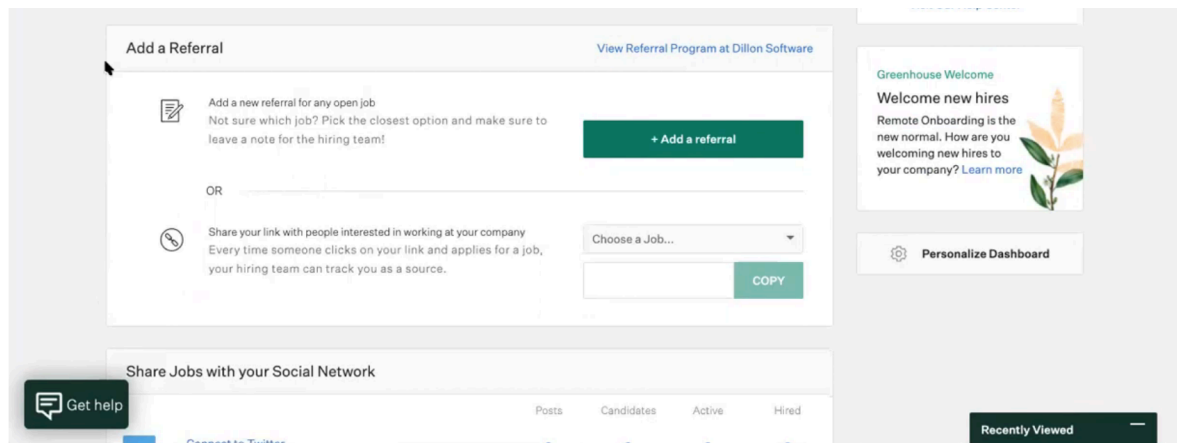
Enhanced "Candidate Experience" form

Bullhorn contains the following fields that could be added during a later iteration:

1. Job Posting
2. Salary Low
3. Salary High
4. Bonus
5. Commission
6. Salary Type
7. Comments
8. Termination Reason

Referrals

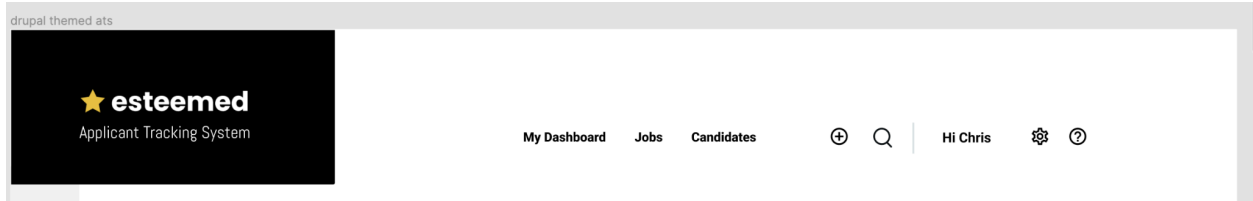Add on for Basic and Paid add on for Professional

My Referrals

Skills

Set of Soft and Hard skills, includes other industries beyond IT:
https://docs.google.com/spreadsheets/d/1PDNqHByG8bUOt8pRGAH4uxW4xwLUH7sr8DXWyy7gGqI/edit?usp=sharing

Navigation

Global Navigation bar

The Global navigation bar contains the following links:

1. My Dashboard (default page after login)
2. Jobs view
3. Candidates view
4. Add Menu
    1. Add Candidate
    2. Add Job
    3. Add Contact
    4. Add Company
    5. Add Note
    6. Add Task
    7. Add Opportunity
    8. Add Lead
5. Search
6. Hi (user first name) > logout under this menu | Log In
7. Global System Settings
8. Help System

https://www.drupal.org/project/business_rules

(Triggers and actions)

Professional Version additions

CRM Add-on

A Customer Relations Management (CRM) option will exist in the Recruiter / Staffing version of the ATS. This offers the staffing firm the ability to merge sales and recruitment into one system.

[Mautic](), an open-source Marketing Automation system, will be used to provide the CRM and marketing automation features. Standard automations will be useful in the Standard edition. These will be implemented in future phases of the project.

Commissions

Submissions

Reviews

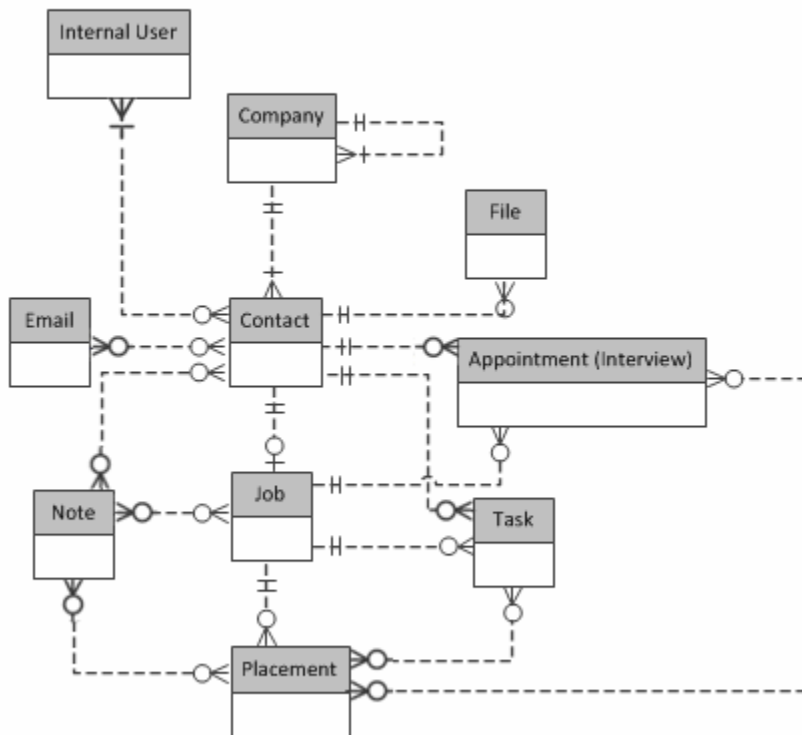| Machine Name	Label	Data Type	Form Widget	Required

Professional Content types

Contact

Can be duplicated in a Marketing automation system, such as Mautic for campaigns to be triggered. Updates can also be provided back to the Drupal ATS via webhooks from 3rd party systems on notifications of status of a campaign.

Machine Name	Label	Data Type	Form Widget	Required
	Email			
	Interviews			
	Jobs			
	Task			
	File			
	Note			
	Company			
	User ID			

	Created	timestamp	N/A	N/A
	Changed	timestamp	N/A	N/A

**Bullhorn Contact Entity Relationship Diagram**

Company

The Company entity has a relationship with the Organization entity which provides a method to create departments within a company.

Machine Name	Label	Data Type	Form Widget	Required
	Company Name		Taxonomy term auto create	
	Company Url		url	
	Company Address		Address	
	Company size		1-49 50 - 999 1000+	

	Industry		Taxonomy	
	Organization		Entity reference	
	Contact		Entity reference	
	Created	timestamp	N/A	N/A
	Changed	timestamp	N/A	N/A

Bullhorn Company Entity Relationship Diagram
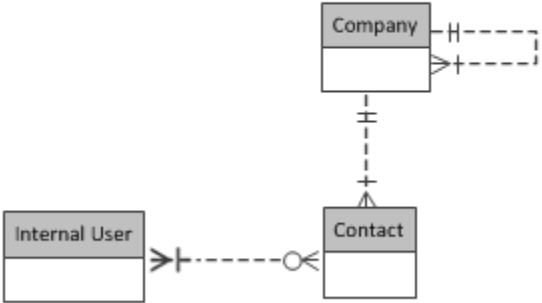
Lead

Has an entity relationship with Opportunity, allowing lead sourcing to convert Leads to Opportunities once they have been qualified.
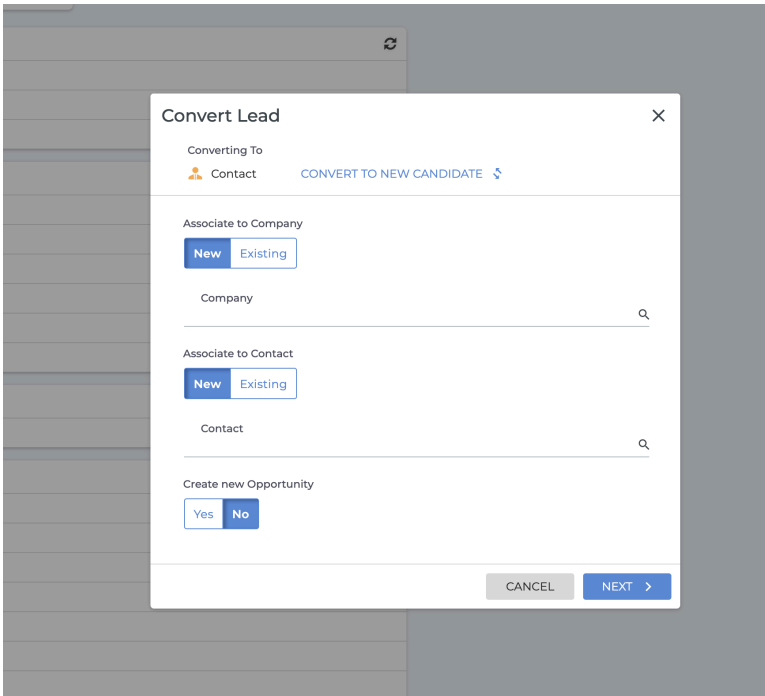
Lead

Machine Name	Label	Data Type	Form Widget	Required
Entity ref Contact				
	First Name	text	text	TRUE
	Last Name	text	text	TRUE
	Role at the company		Dropdown Taxonomy	TRUE
	Job title	Taxonomy (see colleagues list)	Autocomplete	FALSE
Entity ref Company				
	Company name	Check to see IF Company exists IF not create	Auto create entity Company	TRUE
	Company Url		url	FALSE
	Company Address		Address	FALSE
	Company size	taxonomy (see terms sheet)		TRUE
	Industry		Taxonomy	FALSE
Entity reference Contact				
	Contact		Entity reference	
	Email	Email	Email	
	Phone		Phone	

	Address		Address	
`Field group Lead Details`				
	Owner	dropdown	Auto complete of admin users	
	Status	taxonomy ([see terms sheet](#))	dropdown	True
	Lead source	taxonomy ([see terms sheet](#))	dropdown	True
	Overview	text	Multi-line text	True
	Created	timestamp	N/A	N/A
	Changed	timestamp	N/A	N/A

Opportunity

- Has an entity relationship with Job, in that it shares a Description field, and could be seen as a Draft Job, prior to publishing, and securing a confirmed order from a client

Machine Name	Label	Data Type	Form Widget	Required
`field_title`	Title			True
`field_ats_opp_desc`	Opportunity Description	text	Multi-line text	True
`field_ats_opp_owner`	Owner		auto_complete	True
`field_ats_opp_category`	Category	Taxonomy ([see term sheet](#))	Dropdown autocomplete	False
`field_ats_opp_industry`	*Industry*	*Taxonomy (list forthcoming)*		*False*
`field_ats_opp_closed`	Closed / Lost		boolean yes / no	False

`field_ats_opp_reason_closed`	Reason closed			
`field_ats_opp_deal_value`	Deal value		Integer / dollar	True
`field_ats_opp_assoc_lead`	Associated lead		Entity reference	True
`field_ats_opp_date_close`	Expected close date		Date	False
`field_ats_opp_date_actual_close`	Actual close date		Date	False
Entity reference to Contact				
	Contact			True
`Entity ref to Company`				
	Company			True
`field_ats_opp_lead_source`	Lead source	dropdown	taxonomy ([see terms sheet](#))	True
	Distribution list (allow watchers)	tbd		
	Created	timestamp	N/A	N/A
	Changed	timestamp	N/A	N/A

Supplemental information

Languages spoken

1. Arabic
2. Bengali
3. English
4. French
5. German

6. Hindi
7. Indonesian
8. Japanese
9. Korean
10. Mandarin Chinese
11. Marathi
12. Portuguese
13. Punjabi
14. Russian
15. Spanish
16. Telugu
17. Turkish
18. Ukrainian
19. Urdu
20. Wu Chinese

Candidate and Job Categories

1. Admin & Support
2. Business
3. Coaching
4. Design
5. Education
6. Engineering
7. Finance
8. Leadership
9. Legal
10. Marketing
11. People Ops
12. Sales
13. Technology
14. Workplace
15. Writing

Candidate and Job Soft Skills

1. Problem solving
2. Teamwork and collaboration
3. Communication
4. Leadership
5. Time management

6. Creativity
7. Organization
8. Emotional intelligence
9. Decision making
10. Stress management
11. Public speaking

Job Benefits

1. Health Insurance
2. Life Insurance
3. Dental Insurance
4. Retirement Accounts
5. FSA
6. Paid Vacation & Sick Time
7. Paid Holidays
8. Paid Medical Leave
9. Flexible Schedules
10. Education Assistance

BH Needed Support (captured for information purpose)

1. Building trust and happiness
2. Career advancement
3. Niche skills development
4. Confident workplace co...
5. Work-life balance
6. Staying focused
7. Burnout buffering
8. Finding purpose at work
9. Happiness while working
10. Networking and opportunity
11. Strategizing against overall goals

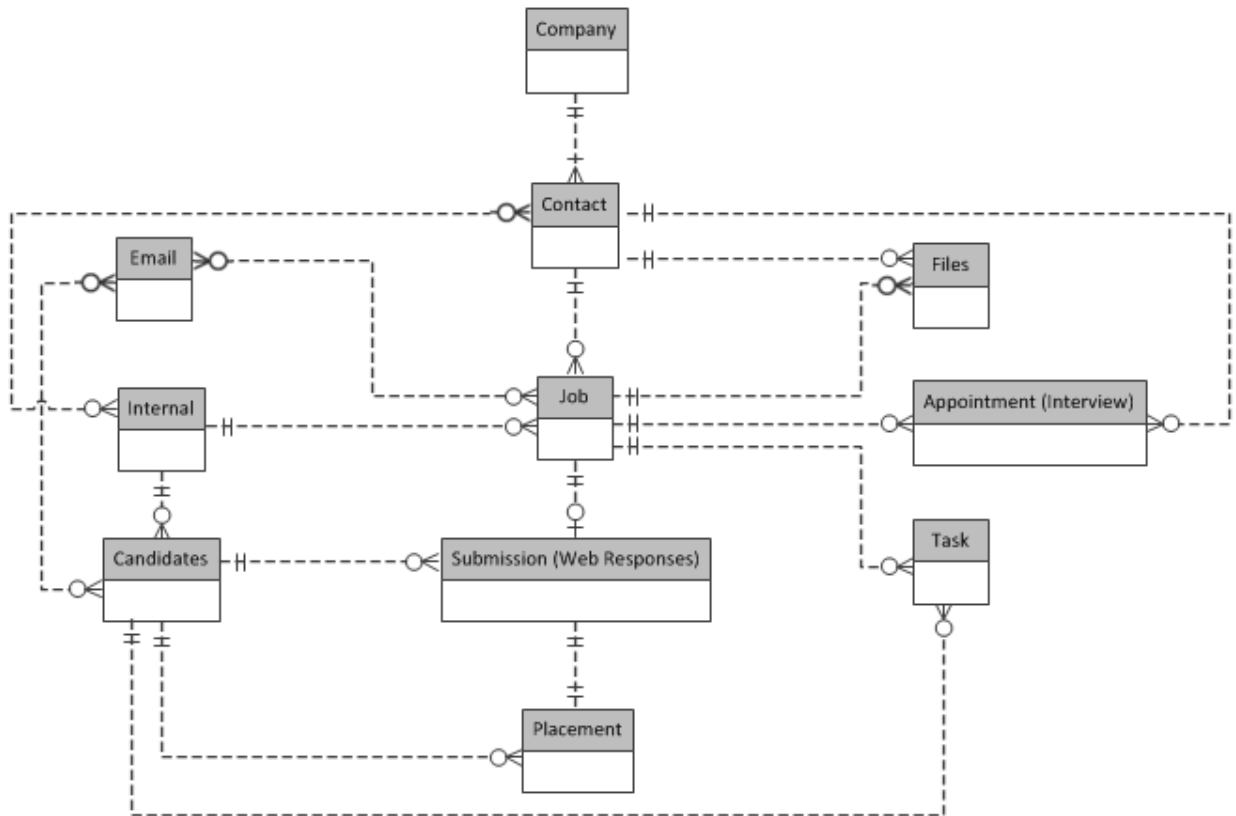# Appendix A: Legacy ATS Core Entity Relationships

Candidate Entity

Bullhorn Candidate Entity Relationship Diagram
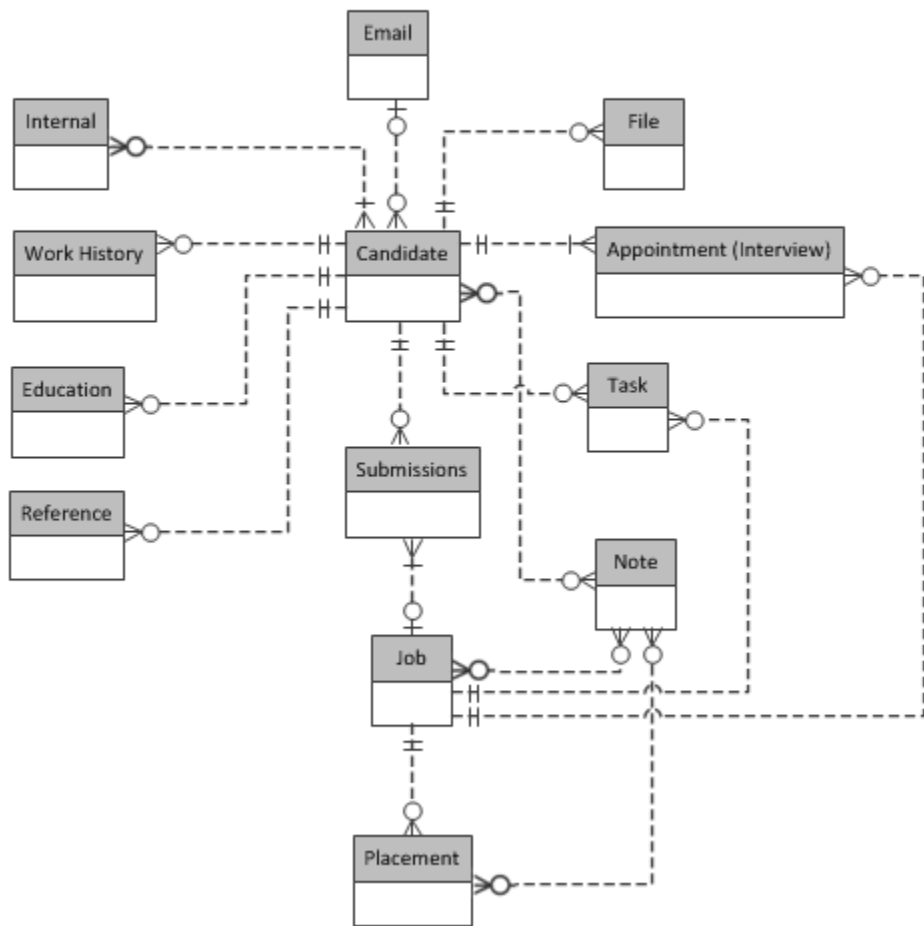
Job Entity

Bullhorn Job Entity Relationship Diagram

Placement Entity